THE METALWORK OF THE LOWER DANUBE

5th century B.C. - 4th century A.D.

by

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Thesis presented for the degree of

Doctor of Philosophy

Department of Fine Art, University of Edinburgh

1981

VOL. I

ACKNOWLEDGEMENTS

The initial research for this study was carried out in Romania by means of a Senior Fulbright Research Grant received for a period of two and one half years during 1974-1977. Needless to say, without this generous support and the opportunity for field study, this thesis could not have been undertaken.

I owe many thanks to my advisor, Dr. Robert Hillenbrand, for his sensitive guidance which was always a source of inspiration throughout the long development of this study. Thanks are due to Dr. R.L.N. Barber for having read sections of this thesis and offering many useful suggestions.

The following museums kindly made photographs available for illustrations: The British Museum, the Louvre, Cabinet des Médailles of the Bibliotheque National, Kunsthistorisches Museum, The National Museum, Denmark, Museo Arqueoloqice Nacional, Madrid, the Metropolitan Museum of New York, The Detroit Institute of Arts, The Cleveland Museum of Art, the Boston Museum of Fine Arts and the Nelson Gallery-Atkins Museum, Kansas City.

ABSTRACT

The original objective of this thesis was to produce a survey of the metalwork recovered from the Lower Danubian region in the Late Antique and Migratory periods. The problem appeared to be largely one of developing a new organization for existing material which was not readily available to Western scholars. Secondarily the study proposed to analyse these forms in order to determine their function and to evaluate symbolic content and - where possible - the technical achievement which they demonstrate.

It soon became evident that there was simply not enough range in the available material to satisfy these objectives. Therefore the period covered was shifted back to classical times and material from adjacent regions was included in order to establish a sound basis for comparison. No attempt was made to prove the evolution of Thraco-Getic or Dacian art from earlier material. Some of the examples illustrated have been cited repeatedly by scholars as relevant for one reason or another. They have become virtually a part of the literature especially associated with Thraco-Getic art, and yet have brought us no closer to appreciating the evolution of this art. While the present state of knowledge of the Thraco-Getic and Dacian culture does not allow more than speculation as to the specific symbolic content of these forms, this symbolism was reflected in similar forms and images in the

established art of contemporary cultures.

Looking at similar or related metalwork over a substantially enlarged region and extended period proved to be fruitful in several ways. The individual character of Thraco-Getic and Dacian metalwork was clearly revealed by comparison with the metalwork of their contemporaries - the Greeks, Persians, Scythians and Celts. Further, through such comparisons the forms themselves became comprehensible as examples taken from large families or categories of forms already ancient by the classical period. Consequently an attempt was made to explain the longevity of these categories of metalwork and the continuity demonstrated in both the forms and their symbolic content.

The originality of this study rests mainly on two factors: the detailed analysis of Thraco-Getic and Dacian metalwork and the interpretation of its technical achievement through analysis of its material structure. The study has perhaps been successful in advancing to some degree current knowledge of Thraco-Getic and Dacian metalwork. It is largely due to the fact that this material is not widely recognised as a link between East and West that care was taken to include early on in the text background information about the cultures and peoples whose influence is clearly recorded in these artefacts. Material relevant to metalwork in general which was discovered during this study and is germane to the forms

themselves is presented in Chapters I and II, and again as essential introductory material. A general description of each category of form precedes the detailed analysis of specific pieces. Thus the study moves from the general to the particular even though this is the inverse order by which the research was conducted. The reason for this is precisely the lack of a major study surveying the entire field.

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PREFACE

This study is a survey of the principal metalwork treasures discovered in the region which lies to the west of the Black Sea and which have been dated to the 5th century B.C. - 4th century A.D., namely the Classical to the early Migratory period. Since the initial objective of this study was to examine evidence of culture flow, east to west from off the Eurasian steppes, Romania, as a threshold to Europe, virtually suggested itself as a fertile site of investigation. And indeed, such it has proven to be. To the author's knowledge no survey of this period exists covering this material in any language, and certainly the literature in English dealing with this subject is very scant.

During the course of research two and one half years were spent in Romania studying the national collections and reading the Romanian literature in this and allied subjects. However, through reading broadly on the history of metalwork, the complexity of this specialization, not to mention that of the chosen geographic location, became all too apparent. Because of the diverse approaches to analysis of the metalwork - technological, aesthetic, iconographic, economic, morphological, and even metallurgical - the literature concerning metalwork is scattered in numerous disciplines. Literature on the metal forms themselves falls largely into two categories: specialist studies in journals which presume some technical knowledge and deal in great detail with a

specific object or treasure; and surveys which treat the subject in general terms. Many different sources must be consulted and wide reading is needed in order to learn how to interpret metal forms and to become sensitive to the particular difficulties confronting the historian of this specialization.

Metalwork is far from the most popular art form. This is due to a number of reasons which relate to the nature of the metal. Of all the materials used in artistic production metal has always involved the most complex technology. Something of this technology should be understood in order to be able to analyse the relationship between the characteristics of various metals, the skills employed and stylistic evolution.

An understanding of the purpose of forms and how they were used is critical to appreciating their practical nature which is often ignored. Metalwork embraces a wide range of forms made to satisfy many purposes from that of total function, such as a tool or piece of armour, to that of basically aesthetic function, such as jewellery intended for trade. An important group of forms within metalwork is that of objects usually made of precious metals (and may well include bronze for some cultures during some periods) and bearing symbolic imagery of a highly concentrated form. Such symbolism concerns concepts of magic, religion, state, military power, prestige, and identification such as tribal, clan,

familial, or personal. These are overall concepts which do not change readily. The tenacious traditionalism which metalwork as a class of artefacts exhibits is inseparable from the value which man places on metals. It is also related to their relative rarity, durability, and complex technology.

There are several factors peculiar to this subject which complicate the task of the historian. Metal forms are easily transported, whether by means of trade, diplomatic gift, mass migration or war and conquest. Smiths moved about freely, were summoned to courts, in colonial locations imitated other styles to suit the taste of clients, and in conquest, might be enslaved and deported. Thus artefacts recovered in a given location may have been produced by skills gained in a far distant place and represent aesthetic values of a very different culture. Metal forms are easily modified: parts can be added or removed and replaced, or they may be inscribed later possibly by new owners. This again makes assignment of a date of manufacture extremely difficult. Forgery is known especially in the technique of casting. Since any metal can be recycled, there are periods for which little remains, especially in precious metals, making a reconstruction of stylistic evolution during some periods of time in some cultures again difficult, if not impossible.

A focus has been maintained on specific articles which have been examined in some detail. This is preceded in each case by a brief statement concerning the traditional category of form of which these articles are representative. Whether they are implements, or mental tools serving magical, cultic or psychological uses, they are working art forms in the strictest sense of the word. This function controls the manner of execution, and the symbolism they bear.

Basic technical information has been introduced and attention given to the method of construction when possible. Structural diagnosis is however a hazardous undertaking at best and must be dealt with cautiously. Analogous material is used as considered appropriate.

A glossary defines some of the basic vocabulary of the craft of metalsmithing and of making and decorating metalwork. The collection of photographs illustrating the works discussed has been made as generous as possible in order to give a basis for comparison of the forms and features discussed. It is regrettable that good quality photographs were not available for some of the Romanian treasures.

Finally, conclusions concerning the Thraco-Getian and Dacian achievement, as demonstrated by metalwork, have been presented. However many questions remain concerning the relationship of these peoples to the

numerous influences to which they were subjected. These influences came from the ancient Near East, Persia, Greece, the Celts, the Scythians, and subsequent steppe peoples among others.

CHAPTER I

INTRODUCTION

POPULATIONS

During the centuries which precede the starting point for this study, namely the 5th century B.C., the people of Thrace and the lands to the west of the Black Sea were already in contact with four very different cultures: Greek, Persian, Scythian and Western European. By the early centuries of our era the Romans had conquered a large part of this region and yet more tribes of steppe peoples moved into this region. Some tribes, such as the Germanic Goths, only passed through. Others, such as the Sarmatians, came to settle and gradually became assimilated with the indigenous populations. The precise influence of these respective cultures in this region is still under discussion. It has been observed that the persistent Greek-orientation of some foreign researchers has retarded a just analysis of the indigenous culture. Misunderstandings initiated by some of the early Greek writers themselves, including Herodotus, are now being revised on the basis of archaeological findings. These people living in the region from the lower reaches of the Danube to the eastern side of the Straits were genetically akin, and their life style as agriculturalists, shepherds, and (in Thrace) horse breeders, defines them as land powers.[1] Greece, as a maritime nation and colonial power,

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1. Venedikov, I. and Gerassimov, T., Thracian Art Treasures, tr. M. Alexieva and P. Drenkov, London-Sofia, 1975, pp.10-12.

presented a very different economy and cultural spirit which had less impact on the Thracians than was formerly believed. Moreover the nature of influence to the coastal regions, as opposed to that of the interior region, is now better appreciated.

Another problem concerns defining the Scythian influence. According to some Romanian scholars a 'Scythian presence' has been traditionally conjectured and their influence exaggerated without a more precise delineation of the sources of 'nomadic traits'. Other Romanian scholars believe that the Scythians' influence in both the Getic and Dacian world is now being understated.[1]

Sandars has cautioned that to localize the 'Scyths' at any time is a hard problem.[2] The Persian and Indian name 'Saka' was used for the steppe people between the borders of China and the Danube. The Greeks called some of these people Scyths. The reference is best understood not as a tribal name, but as one to indicate nomadic and semi-nomadic peoples who practised inhumation instead of cremation, sometimes included horses in their tombs as well as people of rank, wives or concubines, and

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1. Iliescu, V., "The Scythians in Dobruja and their Relations with the Native Population", Relations Between the Authochthonous Population and the Migratory Populations on the Territory of Romania, ed. M. Constantinescu, Bucharest, 1975, pp.13-24, see p.15, n.16.

2. Sandars, N.K., "Orient and Orientalizing in Early Celtic Art", Antiquity, 45, 1971, pp.103-112, p.106.

had a distinctive art style.[1]

The Thracian Tribes

Of the tribes who are recognized as belonging to the large Indo-European family of Thracian people, it was the Ordysians who succeeded in uniting many smaller tribes to form what is known as the Thracian culture. The Ordysae tribe occupied the eastern Rhodopes and the valley of the River Artescus (Arda) which flows into the Maritsa near Adrianople (Edirne). At the height of their power the Odrysian kingdom extended from the lower reaches of the Maritsa River to the Black Sea, to all of eastern Bulgaria and, further north, included the Getae on both sides of the Danube.[2]

The Getae, who are also recognized as members of the Thracian family, occupied the Dobrudgea which lay to the east of the Danube at its mouth on the Black Sea. The Getae also occupied the plains north of the Danube in what is present-day Wallachia. The northernmost Thracian tribes in Romanian territory were called the Dacians by the Romans and spoke the same language as the Getae. Their cultural development was not as advanced as that of the Getae, and the first reference to these people was

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1. Ibid.
2. Venedikov, 1975, p.37.

only in the 1st century B.C. Ancient sources place their combined boundaries at the Slovak Mountains, Northern Carpathians, on the middle and lower Danube, and on the western coast of the Black Sea and the Dniester River.[1] The Daco-Getic[2] civilisation reached its height of power in the 1st century B.C. - 1st century A.D. In the early part of the 2nd century A.D. Rome challenged their power, and, defeating them in 106, made Dacia a Roman province.

Influences from Asia Minor

Thrace, the land on either side of the Danube in Romania, and the lands eastward from the Hellespont, together comprise a cultural community. By the 8th century B.C., these areas were receiving stimulation from the cultural movements which then went from Asia Minor towards the Balkan Peninsula and the Mediterranean world.[3]

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1. Daicoviciu, H., "Dacians and Romans in Trajan's Province", see Constantinescu (ed.), 1975, pp.35-54, p.35.

2. This and related terms are confusing as references to these tribes are not applied with regularity. In the Romanian literature the terms are generally applied as follows: "Thraco-Getae" refers to the Thracians and Getae during the centuries when Thrace is the dominant power; "Geto-Dacian" refers to the centuries prior to the 1st century B.C. when the Getae are the more powerful tribe and "Daco-Getae" (n.) and "Daco-Getic (a.) refer to the period when the Dacians were at the height of their power.

3. Young, R.S., "The Nomadic Impact: Gordion", Dark Ages and Nomads, c.1000 B.C., ed. M.J. Mellink, Istanbul, 1964, p.55.

The Greeks were then importing and imitating the bronzes of Phrygia and Urartu, having learned the art of raising and casting bronze from the Asiatic peoples on the mainland opposite.[1] That Phrygian art exhibits some 'nomadic traits' prior to the invasion of the Cimmerians at the end of the 8th century - early 7th century has been established, though much remains unknown of the origin of these characteristics.[2] The Phrygian culture was mixed, having characteristics originating in South Russia, Assyria, Urartu, Iran and the Neo-Hittite cities of North Syria.[3]

Greek Colonial Cities

In the second half of the 7th century B.C. the Greeks from the Dorian city of Megara began their colonial activities on the Black Sea by founding two towns on the Bosporus, Chalcedon and Byzantium. Soon afterwards the Ionian city of Miletus surpassed the colonizing enterprises of Megara, and in rapid succession founded numerous colonies - reputedly 90 - though this is far too large a figure to be credible.

On the Romanian coast Miletus founded Istrus (Histria) at the mouth of the Danube and to the south Apollonia and

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1. Ibid.

2. Mellink, M.J., "Postcript on Nomadic Art", see Mellink (ed.), 1964, pp.63-70, p.70.

3. Young, 1964, p.55.

Odessus on the Bulgarian coast. To the north Olbia was founded at the mouth shared by the Dnieper and Bug, Tyras at the Dniester, and Panticapaeum and Phanagoria to either side of the Sea of Azov. The destinies of these cities and others founded at later times were to be very different, but all were export centres for Greek goods and gathering points for local products. Some would become important centres of manufacture with the setting up of Greek workshops and studios.

The early history of Histria (so called after the ancient name for the Danube, Istrus) is not well documented. Fortunately the site was not built on after the 5th century A.D. and has remained undisturbed and thus accessible for archaeological investigations. Histria was located at the mouth of a great river system with numerous large tributaries flowing north to south from the southern side of the Carpathians and across the Wallachian plains - the Ialomiţa, Argeş, Olt, Jiu, and others. Goods were transported down the Danube and up this network of tributaries deep into the Getic country-side. The carriers of the Greek imports were local traders, for the Greeks themselves preferred to remain in their coastal cities. In exchange, the carriers brought back the local products - leather, furs, honey and even slaves - to Histria for export southward. Great quanti-ties of fish were taken from the fresh waters of the rivers and the Dobrudgea delta and were dried, smoked, and

salted in preparation for export.[1]

Tomis (Constanța) founded in the 5th century by Miletus, did not begin to play a prominent economic role until the Roman period. However by the 3rd century Tomis was involved to some degree in the grain trade which centred at Callatis to the south. Cereals, grown in the fertile lands immediately to the west, became a very important aspect of the economy and apparently affected the prosperity of the general area.

The chief Greek imports were wine and oil. The volume of trade must have been considerable since fragments of Greek amphorae have been found even at the sites of very small and remote villages throughout the region. Amphorae and amphora handles bear the names of magistrates of Thasos, Cnidos and Rhodes, indicating not only an intense, but also a broadly-based economic activity.[2]

This prosperity in the western Black Sea region reached its height in the Hellenistic period. Eventually this prosperity included Scythians, Geto-Dacians and Thracians, all semi-hellenised local chieftains who became involved in trading and agricultural activities. Judging from the abundance of fine imported ceramic vessels, and to a lesser extent examples of fine metalwork,

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1. Părvan, V., Dacia, Bucharest, 1972, p.88.

2. Condurachi, E., Romania, tr. J. Hogarth, London, 1971, p.79.

they found the luxury products of the Greek world irresistible, and exerted a heavy demand for a constant supply of Greek exports. With the minting of the first Geto-Dacian coins, not surprisingly, the Macedonian coins of Philip II were imitated and later on so were those of Alexander the Great.

The dissolution of the Thracian kingdom and the destruction and upheaval caused by the invasion of the Celts from the north and the west early in the 3rd century were reflected in increasingly precarious times in the coastal cities. Between 55 and 48 B.C. the Dacian leader Burebista conquered the north and west Pontic cities, including Olbia, and incorporated them into a vastly increased Dacian territory. This union was short lived, however, and it was to be the Romans whose presence will draw together the Daco-Getic people into a new enduring culture which shared an international language, Latin.

Scythians

The Scythian presence in the western Black Sea area and its scope of influence, both in intensity and kind, remains a disputed issue and the larger questions of the origin of these peoples and the evolution of their art remain subjects of debate among scholars.

The Scythians entered the Black Sea after having spent a period of some 28 years in Western Asia in close contact

with the Assyrians and Medians, having been successively allies to both nations. In migrating westward in the late 7th century they were following in the wake of the Cimmerians, the first mounted nomads to be mentioned in history and kindred tribes to the Scythians (indeed, they are considered by some to be one and the same people).

The westward expansion of the Scythians in the area north of the Black Sea continued into the 6th century. By the time of Darius' expedition into Scythian territory in 513 B.C. the Scythians were established in the land to the north of the Danube. This appears to have been the northern frontier between the Scythians and the Getic world, the indigenous people who occupied the Dobrudgea itself.[1] In this early period the Scythians continued to make cavalry raids southward as far as the Balkans since plundering was an aspect of their economy. However, gradually their life-style began to evolve towards a sedentary way of life, or at least it did for some parts of their population. During the mid-5th century B.C. intermarriage linked their leading families with the ruling dynasty of Thrace, the powerful Odrysian tribes.[2]

By the mid-4th century B.C. the apogee of Thracian culture was over and the balance of power was held by the

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1. Iliescu, 1975, p.15.

2. Jettman, K., Art of the Steppes, London, 1967, p.25.

Scythian king (or kinglet) Ateas and the Macedonian King Philip II, father of Alexander the Great. Details concerning Ateas and precisely what lands he controlled for what period are few indeed. It is known that he had his headquarters near Tomis on the Black Sea. For a brief period Ateas and Philip were in an alliance against a mutual enemy, the Triballs, a Thracian tribe living further to the west in the Danubian area. This alliance came to an end abruptly in 339 B.C. when Philip invaded Ateas' territory and, at the age of 90, Ateas was defeated and slain. With the dissolution of the Odrysian kingdom in 341 the Macedon came into power.

Meanwhile to the east of the Black Sea yet another nomadic group, the Sarmatians, pressed forward challenging the Scythian domination. By the second half of the 4th century the Sarmatians had taken over the lands west of the River Don. By the 2nd century they had conquered all of the Scythian lands.

The question as to whether or not the Scythians penetrated and settled in Transylvania remains controversial. No evidence of settlement has been found in the southeastern region.[1] By c.600 B.C. there did exist a foreign population settled mainly along the middle

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1. Székely, Z., "Nouvelles données sur la culture gétodace du sud-est de la Transylvanie", Thraco-Dacica, Recueil d'etudes à l'occasion du IIe Congrès International de Thracologie, Bucharest, 1976, pp.231-241, p.231.

section of the Mureş River and its tributaries.[1] The question remains whether these were Scythians or a Scythoid population with a Scythian material culture; their goods do not relate chronologically to the Scythian material found further west in Hungary. It has been conjectured that their zone of origin may have been the forested steppes in Russia rather than the coast of the Black Sea. Since the grave sites of the Scythian type of burials, about 100 altogether, tend to be located along the courses of rivers, it may be that these burials are related to trading activities between the Black Sea and points westward in Hungary where there is proven Scythian settlement.

Persians

From the 6th century B.C. literary sources record several events which brought the Persians into direct contact with the Thracian peoples. The first expedition of Persians into the Black Sea region occurred shortly before 513 B.C. About 513 Darius I led an expedition over the Bosporus and the Danube with the objective of carrying out a punitive action against the Scythians. But the Scythians proved to be an elusive foe without a definite territory to defend, and Darius was forced to

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1. Crişan, I.H., "Once More About the Scythian Problem in Transylvania", Dacia, N.S., IX, 1965, pp.133-145, p.133.

retreat for lack of supplies for his troops. Though Darius' mission failed, events of great consequence to southeastern Europe followed from this Persian penetration. The first direct contact that the Thracians had with the Persians occurred with Darius' entry into their homeland. As he swept northward Darius incorporated local tribesmen, including Getae, into his army, which was already multi-racial.[1] Following his defeat Darius established garrisons of Persian soldiers in cities of the Struma, the Maritsa, and other strategic points in the Balkans under the command of Mardonios, his son-in-law. This action established the western frontier of the Persian empire and initiated a period of some 65 years of direct contact between Achaemenian Persia and southeastern Europe.

This Persian presence was of a very different nature than that of the Greek trading cities established on the coast of the Black Sea. It was not a commercial but a military connection and in this instance the military connection was of a particularly impressive nature. The Persian style of military life was not unlike that of their own royal court in its splendour and comforts, and must have had an extraordinary impact on the imaginations

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1. Herodotus, tr. A. Godley, London-New York, 1st printed 1921, reprinted 1950, 2, 4, 94, pp. 295 and 297, p.299.

of the Thracian people. The officers dressed in costly gold-embroidered robes, wore gold necklaces, bracelets, even anklets,[1] and carried splendid arms and armour. A vast treasure of gold and silver service was carried with the army as standard field equipment. The custom of gift-giving, especially in the form of horses and gold and silver jewellery and vessels, was so admired that it was later to be incorporated in Thracian court procedures as described by Xenophon (see p.105). Emulation extended further to attempts to produce plate imitating Persian examples and both imports and local products have been found among the burial gifts of Thracian chieftains (see Chapter III, The Phiale).

The contact with these two contesting powers, Greek and Persian, produced various allegiances which were not always steady. The coastal Thracians allied themselves at times with the Greeks and at other times with the Persians. But by the time of the Greco-Persian wars the Greeks had the Scythians or part-Scythian tribes as allies, and the Thracians had allied themselves with the Persians.[2] With the Peace of Kallias in 450 the Persian interest in the Balkans ceased. This was followed by a period of unrest before the Ordysian kingdom rose to power.

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1. Macurdy, G.H., "A Note on the Jewellery of Demetrius the Besieger", American Journal of Archaeology, 36, 1932, pp.27-28.

2. Sandars, 1971, p.104.

The Achaemenian culture was clearly not the first wave of orientalism to flow into western Asia Minor and southeastern Europe. Archaeological evidence yields artefacts bearing archaic elements which had filtered westward across Asia Minor in earlier times, elements from the art of Marlik, Urartu and Assyria.[1] However, the Achaemenian period is far better documented than that of earlier centuries. But, if this well-documented historical event is seen in isolation, it could be that the effects of long-sustained cultural contact through trade, intermarriage, alliance, the occasional war, or migration are then being under estimated.

The Celts

By the 4th century B.C. the Celts had penetrated into Hungary, Slovakia, western Poland and the western part of Romania. After the death of Alexander in the late 4th century other Celtic tribes also began pressing for entry into the Balkans from the southwest. Several attempts were repulsed between the years 311 and 281 B.C. by Alexander's former general Lysimachus. However with his death in 281 B.C. a massive coalition of Celtic tribes swept through Thrace to be stopped only at Thermopylae by

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1. Powell, T.G.E., J. Boardman and M.A. Brown (eds.), "From Urartu to Gundestrup", in The European Community in Later Prehistory, London, 1971, pp.181-210, p.190f.

combined forces of Greek infantry and cavalry. And in 278 the Celts succeeded in destroying and looting the sacred sanctuaries of Delphi. Some Celts continued eastward and crossed the Hellespont into Asia Minor and others turned northward to settle in the region of present-day Belgrad at the conflux of the Sava and Danube.

In the northwest much recent evidence indicates that the earliest penetration by Celts into the northwestern part of Romania or Transylvania begins to occur from the second half of the 4th century. Evidence of a major settling of Celtic groups dates to the end of the 4th and the beginning of the 3rd century.[1] Their presence throughout the 3rd century and during a good portion of the 2nd appears to have been very strong. From that period on there is a notable diminution in settlement and the graves are less richly furnished.

Over 140 sites of La Tène type settlement have been found in Transylvania.[2] These locations by and large correspond to the richest and most fertile regions including pasture land, farmland, and locations of iron, silver, copper and saltmines. Archaeological evidence indicates that the indigenous population had been subdued

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1. Zirra, V., "Aspects of the Relations Between Dacians and Celts in Transylvania (4th-2nd centuries B.C.)", see Constantinescu, 1975, pp.25-34, p.29.

2. Ibid.

by force, but that it shortly established settlements in close proximity to those of the Celts. The presence in Celtic cemeteries of native burials and local ware used as grave goods within Celtic burials indicates that the process of assimilation was not unilateral. Recent studies reveal that the Celts absorbed a number of cultural elements from the Geto-Dacians, the Greeks and the Thracians on the right bank of the lower Danube.[1]

In the sub-Carpathian and mountain regions evidence of Celtic settlement is slender. It is believed that the Celtic presence was more or less confined to the plains region of Transylvania, and that the sub-Carpathian settlements of the Dacians were sheltered from direct contact with them. The political and economic relations between the Celts and Dacians ended towards the close of the 2nd century B.C. At that time the confederation of Dacian and Getic tribes began its rise to power and to reclaim territories to both the east and the west of Transylvania. This process of expansion was to end in 106 A.D. with the Roman conquest of Dacia.

Romanization of the Daco-Getae

Archaeological evidence now available refutes completely the old idea that the Dacian population was exterminated at the time of Trajan's conquest. Nor was

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1. Ibid., p.31.

it displaced to inhabit only the mountainous regions, mainly the Carpathians.[1] Rather does the evidence support a theory that the process of Romanization was rapid, comprehensive, and had long-lasting effects which were not reversible with the withdrawal of Roman forces in 271 A.D.

Actually the process of Romanization of the Daco-Getae population began long before Trajan's conquest in the summer of 106 A.D. A steady flow of Roman trade goods into this region had been under way since the 2nd century B.C.,[2] and the Latin alphabet was in use in this region by at least the second half of the 1st century A.D.[3] Beyond such material exchanges early evidence of the penetration of Roman religious ideas is found in a baked clay medallion found at Sarmizegetusa, the Dacian capital. The Dacian goddess Bendis is represented with the features of the Roman goddess Diana in a form imitating a denarius issued in the year 80 B.C.[4]

That the Daco-Getae population especially in the cities had contact direct or otherwise with Roman culture is clearly well established. The Romans always placed their administrative centres in urban locations. The

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1. Daicoviciu, 1975, p.38.

2. Glodariu, I., Dacian Trade with the Hellenistic and Roman World, tr. N. Hampartumian, Oxford, 1976.

3. Daicoviciu, 1975, p.45.

4. Ibid.

role of an army permanently garrisoned in another country is well known even if its effect were to be limited to only the immediate vicinity. However, there were aspects of the actual process conscientiously carried out by the Romans which greatly accelerated the assimilatory process. A policy of massive colonization by Latin-speaking peoples into the rural areas brought the Dacian population, most of whom inhabited the countryside, into immediate contact with the Latin language. A large part of these agricultural colonists were ex-servicemen officially invited into the new province where they built homes and intermarried with Dacian women. The granting to these ex-servicemen of the legal status of Roman citizenship further strengthened their integration into the province of Dacia. Since Latin was the only possible means of communication between such a diverse population, the Dacian language, a satem-type Indo-European language, soon disappeared.[1] From this basis of Latin there was to evolve the Romanian language.

Epigraphic evidence of the comprehensive conversion to the use of Latin is found in some 3000 Latin inscriptions discovered in Dacia. This is more than in any other south Danubian province except Dalmatia which was ruled by the Romans for 5 - 7 centuries.[2] By comparison

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1. See Russu, I., Limba Traco-dacilor, Bucharest, 1967.

2. Daicoviciu, 1975, p.41.

there have been only 35 Greek and a few bi-lingual inscriptions recovered from the same region.

The Romans never occupied all of what is Romanian territory today, their province of Dacia being centred in Transylvania. The influence of Romanization was understandably weaker but not entirely absent around Bucharest, among the Carpae people to the east and northeast, and in Moldavia to the far northeast. The Dobrudgea on the coast of the Black Sea had a mixed character, essentially Greco-Roman. This mixture was most pronounced on the coast while the interior became more Romanized. The colonizing process was far less extensive here than in Dacia, but this factor was offset in time since the Dobrudgea was a part of the Roman Empire until the 7th century.

The fact that withdrawal of the Romans in 271 did not initiate a return to the forms of Dacian culture is probably the most convincing evidence that the Romanization process, with all its varying degrees of intensity, was a process of genuine acculturation. The continuity of the Romanization process in Dacian lands and north of the Danube generally was facilitated by the continuity of the south-Danubian province which developed for many more centuries under the protection of the Imperial armies. The Danubian cities of Sucidava, Drobeta, and Tibiscum continued to be ports of entry, so to speak, of the Roman culture into the lands north of the Danube. The fact

that bronze coins continued to circulate in the 4th century is certain evidence of the local population's continued presence. Fifteen Christian monuments and objects dated to the 4th-early 5th century have been discovered in Romanized territory of Dacia, but none in the other adjacent regions, nor in any Gothic settlements. In the 4th century the latter began to appear within the limits of the former Roman province.[1]

In the 5th century great disruptions occurred and it is at this time that the Dacian peoples leave their cities and towns and move into the mountainous regions, leaving the open plains and fertile river valleys for more sheltered locations. The Slavic peoples began to press forward from the north and settle in these open areas and beside the deserted rivers. In time these people were assimilated into the culture of the indigenous population, leaving their contribution in Slavic words incorporated into the Romanian language.

The Sarmatians and Kindred Tribes

As early as the late 4th century B.C. Scythian control of the North Pontic steppes was challenged by a new wave of Indo-European horsemen, the Sarmatians, whose nuclear domain had been the lower Volga steppes.[2] The

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1. Ibid., p.51.

2. Sulimirski, T., The Sarmatians, London, 1970, p.18.

Sarmatians, a union of several tribes which never formed a political entity, lived in a vast expanse from the Altai Mountains in Central Asia to China in the east and southern Russia in the west. Eventually they spread as far west as France and Spain and some, serving in the Roman army, were to settle in the British Isles. Their life-style when they entered the Pontic region was similar to that of the early Scythian period. They lived by stockbreeding, practising seasonal migration, using wagons and felt tents, and engaging in only minimal agricultural activities. Their material culture, while sharing common characteristics, never exhibited uniformity.

The advance of the Sarmatians began slowly around the late 5th to the early 4th century B.C. when they crossed the River Don in the eastern steppes. Their chief advantages over the Scythians were an arms superiority and a new style of battle tactics.[1] They too used the composite bow, but they were not mainly archers as were the Scythians. They also carried the akinakes-type sword though their model was longer than the Scythians'. They wore a metal conical helmet, scale armour, carried wicker shields, and used the sling and lasso. A new weapon was their long lance which was

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1. Phillips, E.D., "New Light on the Ancient History of the Eurasian Steppe", American Journal of Archaeology, 61, 1957, pp.269-280, p.277.

used to advantage in their aggressive battle manoeuvres, even though the stirrup, for bracing the body against impact, was not yet in common use. Thus a combination of factors swung the balance in their favour. Superior arms and the use of armour certainly helped them, but by this period there was a decline in the military strength of the Scythians which cannot be discounted. Their culture was evolving increasingly towards a mixed economy which included agriculture and trade as prime concerns. The first region to be lost by the Scythians to the Sarmatians was the rich open grazing land which lay to the east and north of the Crimea. The refuge of the Scythian leaders, presumably the 'Royal Scyths', was now behind the fortified walls of the cities of the Crimea and on the Dobrudgea.

The material evidence from the 4th century reveals a significant change in the quality and in the kind of grave goods. However, archaeological evidence in recent years has not confirmed the hypothesis that a 'Sarmatian empire' existed between 125-61 B.C. stretching from the Don to northwest Bulgaria and eastern Transylvania.[1] In total, only 160 Sarmatian graves have been discovered, a small figure in comparison with over 1300 grave sites of free Dacians in the same region.[2] The Sarmatians

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1. Harmatta, J., "Studies in the History and Language of the Sarmatians", Acta Antiqua et Archaeologica, 13, 1970, pp.34-40.
2. Bichir, G., "Relations Between the Sarmatians and the Free Dacians", see Constantinescu, 1975, pp.55-65, p.63.

living on the North Pontic steppes remained nomads, but those west of the Dniester adopted a sedentary or at least semi-sedentary life-style. By the 1st century A.D. they had advanced to the Danube as is confirmed in the writing of the Roman poet Ovid (exiled to Constanța 9-17 A.D.). There they posed a threat to the rich coastal establishments, especially in the winter when they could easily cross the frozen Danube.

In the plains which they occupied in the middle and lower Danubian region evidence attests to a mutual exchange between Sarmatians and Daco-Getae as seen in their inter-mixed grave goods. These borrowings are particularly notable among the Dacians in Moldavia who readily assimilated aspects of the Sarmatian metal arts which introduced the polychrome style, metalwork inlaid with stones (see Appendix III, The Sarmatian Contribution).

It is true that there was a general decline in the aesthetic quality as well as in the craftmanship of the goods produced in the North Pontic region during the 2nd and 1st centuries B.C. This accompanied, but was not accountable to, the waning of Greek influence, including the use of the Greek language at this time. The steady influx of Sarmatian peoples and their kindred tribes (Roxolani and Alans) who maintained ties with tribes in Central Asia, led to an Iranianization of the whole population. With the early centuries of our era, there was a general era of prosperity in the Northern Black Sea

region due partially to the Pax Romana. This economic upsurge was reflected in a rise in the quality of work produced in the long established goldsmithing centres at Panticapaea on the Crimea.[1]

The early 3rd century A.D. was a period of great unrest among the barbarians, a fact underscored by the large number of hoards which date to this period. By 200 A.D. the Goths began to move down from the north into the mid-Dnieper and in 250 they attacked the city of Olbia then under Roman protection. Their conquest ended the continuity of Scythian-Sarmatian influence which had existed for close to a millenium in the Crimea, and by the 4th century A.D. the Dniester formed the western boundary of the Ostrogothic empire. The Goths assimilated many features of the Sarmatian culture and absorbed the North Pontic characteristics of polychrome style which they in turn helped to spread across Europe.

The Goths

The presence of the Goths in Romanian territory spans about one century from c.275 when they arrived in Moldavia to 385 when they passed south of the Danube in flight from the Huns.[2] By the beginning of the 4th

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1. Sulimirski, 1970, p.149.

2. Diaconu, G., "On the Socio-economic Relations between Natives and Goths in Dacia", see Constantinescu, 1975, pp.67-75, p.67.

century the Goths had pressed westward in Moldavia, and begun to penetrate through the passes of Buzău and Oituz into the south and southeastern parts of Transylvania. They were probably never in the western or southwestern parts of Romanian territory.

In the 3rd-4th centuries A.D. the Gothic patterns of culture were very similar to those of other northern tribal populations. They lived by agriculture and animal husbandry. Some evidence of workshops has been found, one for glass-making in the Ukraine, and a jewellery workshop and one for the manufacture of bone combs in Romania.[1] Fibulae and buckles of similar sorts, and made of the same alloy (bronze and zinc), have been found in the Ukraine (Kasanova) and in Romania (Mogoşani-Dîmboviţa).[2]

Both written sources and archaeological findings show that the chiefs of the tribes established their residences separate from the villages of the ordinary population. At these centres the goods and herds of the leaders, who were at once military chiefs, great priests and supreme judges, were also concentrated.[3] It is presumed that such a residence was established in

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1. Ibid., p.71 and see n.29.
2. Ibid., n.31.
3. Ibid., p.73.

the precincts of the Pietroasa-Buzău castrum in south central Romania. Archaeological findings dated to the 4th century and attributed to the Visigoths have been found in the area of the castrum, and remains of villages and necropolises located nearby have been proven to have been associated with the castrum itself. It is from this vicinity that the famous Pietroasa treasure, certainly a tribal collection, was discovered in 1837. The theories which surround the date and origin of this treasure are discussed below (see Appendix IV).

METAL, SKILL AND CONCEPT

Before turning to the specific artefacts, the nature of metal will be considered, the skills required to work it, and some of its specialized functions which are derived from its intrinsic value and durability.

Since man first discovered metals and began to create with them, he has embodied some of his most essential beliefs in them. Today, living in an age of high technology and mass production, we are understandably insensitive to hand-worked materials and methods. Certainly we stand at a far remove from being able to experience any material as being sacred. However, when man first began to create with metal, he did sometimes regard metal as sacred.[1] A formidable tradition of

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1. Eliade, M., The Forge and the Crucible, tr. S. Corrin, London, 1962, p.27.

ritual, magic, myth and song surrounds the history of metal production and the magico-religious beliefs and practices of its workers.[1] No metalworking culture is without this mythology documenting the dawn of its metallurgy, whether they originated it or borrowed it along with the technology.

Before the ore stage, that is before man learned to smelt and cast metals, he discovered meteoritic iron. This he reserved largely for the production of sacred objects, but he also put it to use directly, setting it up as an idol to be worshipped, a piece of the heavenly vault or a gift from the gods.[2] The sacrificial knives of meteoritic iron were the most prized and sacred objects owned by the gold-rich culture of the Aztec people.[3]

The Smith and the Studio

The very nature of metal has shaped man's response to it and tended to support a traditional conservatism. Metal-workshops have always been the most costly of all art

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1. Forbes, R.J., Metallurgy in Antiquity, Leiden, 1950, Ch. 4, The Evolution of the Smith, his Social and Sacred Status.

2. Kunz, G.F., The Magic of Jewels and Charms, Philadelphia-London, 1915, pp.90-91.

3. Rickard, T.A., Man and Metals, Vol. 1, New York-London, 1932, pp.136-149.

studios to run in any culture, and have had a tradition evolve within them which is unlike that of any other art form.

The mastery of metalsmithing techniques used to produce handcrafted products is a demanding process requiring years of apprenticeship, a fact as true today as it was in Roman times despite the convenience of machine tools. The amount of technique to be mastered within a given workshop would surely be a measure of the level of achievement of the shop itself. Considering a standard workshop of the Classical period, at least ten years would have been required for an apprentice to learn all the procedures from preparing the ingot to the finished product. The length of a well-rounded training period is about the same today as it was then. There is simply too much manual dexterity to be gained, and too much knowledge of the behaviour of metals themselves that can only be learned from observing them in operation, for the training period to be appreciably reduced.

A recent experiment carried out in duplicating a pattern-welded sword gives some suggestion of the time required to execute a single weapon. The sword, including the handle and scabbard, required 75 hours of labour.[1] The sword blade alone required 28 hours which

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1. Anstee, J.W., "The Technology of Ancient Glass and Metal", Nature, 1956, 178, No. 1430.

included 128 separate welding heats followed by forging. The final product weighed 26 oz.; 19 oz. of the initial amount of metal had been removed by grinding. When the time required in antiquity for mining the necessary ore, and for refining the amount of metal used, is added to the manufacture time, the expenditure of human effort would be prodigious by today's standards of labour, not to mention the economic comparison.

The Gift and the Sacred

Both in the higher civilisations and in the barbarian cultures contemporary with them, precious metal work was used for gifts given by the leadership group as a mark of special favour, as a reward for service, or as a diplomatic gift sent abroad to establish relationships. Such gifts were virtually equivalent to a diplomatic action in the more important instances. Metal objects, in the form of plate and jewellery, were elements of the protocol of statecraft and functioned essentially as specie does in a more developed state.[1]

Besides serving a political use, metal forms were used in religious functions and as objects of offering. As to their actual treatment, handling and placement during and after ritual use, information is frequently

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1. Frye, R.N., "Sasanian Silver and History", Iran and Islam, ed. C.E. Bosworth, Edinburgh, 1971, pp.255-262.

sketchy or lacking entirely. Literary sources are sometimes helpful in shedding light on their use as offerings. In the annual inventories of some of the Greek temples records of offerings have been preserved. Detailed accounts list the kinds of goods received as offerings and among these are vast quantities of articles made of metal, especially vessels. These offerings and dedicated goods were catalogued and displayed in the temple precinct, and the excess was stored away. This stored wealth, which belonged to the population of the city-state itself, could be liquidated in time of need and thus functioned much as a reserve bank does in modern times. In the late Roman period private collections of plate and jewellery owned by wealthy families were used in a similar manner.

Goods made of precious metal have been used as burial gifts since remote antiquity. Some of these goods were standard everyday equipment and others had a specific cultic significance, whether magical or religious. In studying large groups of metal forms left by cultures until fairly recent centuries, one discovers that an amazing proportion of these objects are either cultic in nature, or bear cultic associations, even though they are not specifically cultic objects. Then, too, there are forms which are not generally cultic, such as the greave, which might in fact have been manufactured exclusively for

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ceremonial use or as funerary art.

Cultic Themes

Cultic objects bear the motifs expressing cultic themes.[1] Once a motif, image or sign has been invented for a sacred idea and becomes institutionalized, it does not easily lose the quality of sacredness with which it has been endowed. Further, a configuration cannot be stabilized unless it is perceived as a sign.[2] While the inertia to carry an institutionalized form forward is strong,[3] it is particularly powerful in the case of the cultic form, and compounded by other factors when it has been made with metal. Real thematic changes arise out of the slow evolution of a new life-style as from hunting and gathering to agriculture; an internal cultural change, or suddenly through a dynastic revolution or conquest. But of course no new regime or religion has ever entirely eradicated the art of its predecessor.

In short, if there is nothing challenging the perpetuation of a cultic motif, it will remain viable almost indefinitely. Evidence of this conservatism is well demonstrated in the objects in the region under consideration.

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1. Hauser, A., The Philosophy of Art, London, 1959, p.35.

2. Peckham, M., Man's Rage for Chaos, Biology, Behavior and the Arts, New York, 1969, p.89.

3. Hauser, 1959, p.174.

Cultic Objects

A substantial amount of material having a cultic use or cultic associations is made of metal, precious or otherwise. Articles of this class were favoured burial gifts. In times of danger sacred objects were buried for safe-keeping never to be reclaimed. Such is believed to have been the case with both the 4th century B.C. Panagyurishte treasure of Bulgaria and the 4th century A.D. Pietroasa treasure of Romania.

There were many types of cultic vessels which were used to hold fluids of various sorts to be either consumed, as from the rhyton, or to be poured in libation, as from the phiale mesomphalos and situla. Such vessels were used at ritual or sacrificial enactments, and were a physical reference to concepts of a mythical, magical or religious nature. As such, they are objects functioning on planes of abstract thought as well as functioning in a practical manner. Cultic objects, whether independent of ritual or employed within it, are invested with visual symbols which convey something of the underlying cultic concepts.

The Language of Sign

The force of the sign lies in its power of reference to objects or ideas known within a given culture. Signs can accumulate great power, and some have survived, still comprehended, for astonishing periods of time. Some

sacred images are virtually timeless. This is not to say that comprehension of the original underlying significance and the consequent intended application of the sign does not undergo modifications, or even at other times become lost entirely. Signs can linger on as neutral vehicles long after the associated beliefs have vanished, and they can be handed on even though they convey something very different.[1]

The prime force of the cultic object lies in its referential power. Thus it can best be interpreted as something whose form, imagery and even material have been selected and shaped to communicate ideas in sign language. Thus a cultic object is not simply a vehicle for signs or sign-bearing. In form, shape, imagery and function, it may have symbolic meaning. Even its method of manufacture may have been prescribed by a code of magical or religious law.[2] These laws may even restrict who is allowed to work the material, when, and under what particular conditions.[3]

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1. Ibid.
2. Forbes, 1950, Ch. 4.
3. Ibid.

CHAPTER II

GROWTH AND DEVELOPMENT OF METALWORK

Metalworking techniques continued to expand from ancient times through to the early Hellenistic period by which time all techniques were known except for that of mass production, a development undertaken by the practical Roman world. No new techniques were to be invented until modern times.

The periods of florescence of the metal arts are inevitably related to periods when metals are in abundant, continuous supply for some time. The economic factor, and frequently associated political and military ones, are inseparable from technical invention. Likewise, in periods of economic crisis or stagnation changes are immediately reflected in the metal arts and are detectable both in the quantity and quality of goods recovered. The scale of objects and their overall weight also tend to reduce in economically poor times and expand with affluent times.

The rate of change of demonstrated skills in a particular location for a given period can be quite astonishing. A scarcity of precious metals means work-shop operations contract. If the techniques were not being practised, they were not transmitted to the appren-tices, and thus the actual capacity of a workshop could

radically alter within a few decades. Eventually technical knowledge and skills were lost as operations shifted to the increasingly more economic means of production and to those requiring less skill (as original chased objects duplicated by means of casting).

Besides the archaeological material recorded evidence of the growth and development of the metal arts is to be found in many different indirect sources, such as literary references, temple inventories, wall paintings, vase paintings, statues and bas reliefs. From this evidence, both direct and indirect, the level of production can be inferred with some degree of accuracy.

Classes of metal objects which were singled out and endowed with special significance conveyed in their form and imagery are the more revealing categories to observe. This is true especially with objects which had long histories of use for then the slow process of modification generally, and the different treatments of specific motifs or symbols, can be followed. Objects used for votive offerings or in ritual ceremonies can have immense histories of application. The belief structure associated with these forms may well undergo significant change over long periods of time, and pagan ritual objects may be absorbed into new religions. These in time may gain a secular or individual application. The <u>phiale mesomphalos</u> of the Near Eastern and Eastern Mediterranean sphere was one such vessel. In briefly

tracing the development of the metal arts in these spheres the phiale can be shown to have served different purposes until its recognizable form fades into oblivion long after its religious importance has ceased.

GREECE AND PERSIA

Herodotus tells us of one of the first donations made by a foreigner, namely that of the Lydian King Gyges (ca. 687-652). It is recorded that he sent numerous offerings to Delphi which included, besides silver, six golden bowls which weighed 30 talents (about 1750 lbs.)[1] and stood in the treasury of the Corinthians. The next offering of note is that of his great grandson Alyattes, who sent a thank-offering for the cure of a disease, a great silver bowl on an iron stand.[2] The donations of his son Croesus, who reigned in the mid-6th century B.C., far exceeded all others.[3] These have been calculated at not less than 7500 lbs. of gold.[4] Even if these figures are exaggerated, the impact of a large donation of gold on a people who had none and possessed very little silver had

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1. Herodotus, I. See Godley's note 1 on p.19. The Attic talent has a weight of about 58 lbs. avoirdupois.
2. Ibid., 25, p.29. Alyattes died in 560. The stand was still there in the time of Athenaeus (ca. 210).
3. Ibid., 50f, p.57.
4. Sutherland, C.H.V., Gold, London, 1969, p.66.

to have been extraordinary.

It is to Croesus that the first true coinage is attributed, he having introduced a pure gold and a pure silver coin, thus producing the first bimetallic system at a ratio of 1:10.[1]

In Persia's history silver has been more prominent than gold. Controlling access to both gold and silver mines, the Achaemenids could well produce a bimetallic coinage, the gold daric and silver shekel. Frye makes reference to a pattern detectable throughout Near Eastern history,[2] namely that gold comes to the fore in a growing economic period, as does silver in periods of consolidation, rest, or stagnation of a state or empire.

The Achaemenids' use of both gold and silver in everyday articles as well as ritual forms far exceeded the Greek use, for the Greeks at this period were essentially still poor in metals. The lavishness of the Achaemenians' personal accoutrements, embroideries, jewellery and the magnificence of their table service and gold and silver inlaid furniture were no less than awesome to the austere Greek mind at the time of the Persian Wars.[3] Herodotus tells a story to that effect of an incident which took place following the Battle of Plataea.[4]

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1. Ibid.
2. Frye, 1971, pp.255-262.
3. Herodotus, IV, ix, 80-81, pp.253-255.
4. Ibid., 82, p.257.

> ... Pausanias, seeing Mardonius' establishment with its display of gold and silver and gaily-coloured tapestry, bade the bakers and the cooks to prepare a dinner in such wise as they were wont to do for Mardonius (the Persian general). They did his bidding; whereat Pausanias, when he saw golden and silvern couches richly covered, the tables of gold and silver, and all the magnificent service of the banquet, was amazed at the splendour before him, and for a jest bade his own servants prepare a dinner after Laconian fashion. When that meal was ready and was far different from the other, Pausanias fell a-laughing, and sent for the generals of the Greeks. They being assembled, Pausanias pointed to the fashion after which either dinner was served, and said: "Men of Hellas, I have brought you hither because I desired to show you the foolishness of the leader of the Medes; who with such provision for life as you see, came hither to take away from us ours, that is so pitiful."

The booty gained from the conquest of Persia had a profound effect on Greece, not only economically, but artistically as well. The factors which contributed to a period of unprecedented expansion in the Greek metal arts were several: gold had entered into the economy in a sizeable quantity; a rich vein of silver had been discovered at the Laurion mines in Attica; and Athens had gained control of the gold mines of Pangaion[1] in Thrace. Domestic silver was still to be rare until the end of the 5th century, but earlier the increased production is recorded in the temple inventories. The late 5th century inventory record at the Temple of Athena mentioned 163 phialai weighing 16,653 drachmas (50 kg.)[2]

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1. Strong, D., Greek and Roman Gold and Silver Plate, Glasgow, 1966, pp.2-3.

2. Ibid., p.xxvi.

and, by the 2nd century, there were 1600 phialai recorded at the Temple of Apollo at Delos.[1]

In the 5th century period the art of chasing and repoussé, or toreutics, reached a height of expressiveness in the hands of the Greek goldsmiths and silversmiths which has been equalled only in the Renaissance. Pliny has credited Pheidias with having been the first to have revealed the capacities of and indicated the method of making statuary.[2] It is true that during this period toreutists became famed as in no other time. Many of their names, and the titles of their works survive and some of these works referred to are known to us indirectly by means of facsimiles.[3] In one example, the Heracleot bowl on which is worked in relief a representation of the sack of Troy, both the designer and maker have their names recorded.[4]

Apparently a finer distinction was made at that time than we draw today in grouping artists by their method of

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1. Homelle, T., "Comptes des Hiéropes du Temple d'Apollon Délien", Bulletin de Correspondance Hellénique, 6, 1882, pp.1-167. See p.109.

2. Pliny, Natural History, IX, tr. H. Rackham, London-Cambridge, Mass., 1952. See XXXIV, xix, p.167.

3. For an example of a facsimile see the medallion of Athena after Pheidias' gold and ivory statue which was placed in the Parthenon: J. Charbonneaux, Greek Bronzes, tr. K. Watson, London, 1962, p.IX, fig. 2.

4. The inscription on the bowl reads: "The design is by Parrhasius, the work by Mys". See Athenaeus, The Deipnosophists, tr. C.B. Gulick, New York, 1933, V, xi, 782, p.41.

working or techniques used. The workers of direct metal techniques (toreutae) were a category unto themselves, and those working by indirect metal moving techniques or casting (statuarii) formed yet another category.[1] Pliny chided the Greek evaluation of learning for placing painters long after statuarii ac toreutae, thus underlining the fact that the distinction existed.

Again Pliny gives interesting insights as to how esteemed both toreutica and painting were at that time in his reference to the painter Pamphilus:[2]

> It was brought about by his influence, first at Sicyon and then in the whole of Greece as well, that children of free birth were given lessons in drawing on boxwood, which had not been included hitherto, and that this art was accepted into the front rank of the liberal sciences. And it has always consistently had the honour of being practised by people of free birth, and later on by persons of station, it having always been forbidden that slaves should be instructed in it. Hence it is that neither in painting nor in the art of statuary[a] are there any famous works that were executed by any person who was a slave.
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> Translator's note (a) The whole of statuary as contrasted with painting.

With the conquest of Alexander the Great, a second great influx of precious metals entered the Greek world. Since discovery of new mining sources was one of his objectives, prospectors were included within his retinue. From their successful activity it could be stated that silver was produced in almost all the countries of the

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1. Richter, G.M.A., "A Greek Silver Phiale in the Metropolitan Museum", American Journal of Archaeology, 45, 1941, pp.363-389.
2. Pliny, XXXV, 77f, pp.317-319.

empire.[1] While earlier gold had been hoarded, it now became more common, circulating in the hands of ordinary people, though it was to become scarce again in the Late Hellenistic period. This scarcity was accompanied by a decline in both quantity and quality of metal work.

ROME

Rome was poor in metals in her early years, not striking a silver coinage until 269 B.C.[2] and, until about 200 B.C., silver plate was rare in the city.[3] However, by the time of the Second Punic War, gold and silver in various forms were common even in a provincial treasury. Envoys sent by the town council of Neapolis offered the town treasury, 40 massive gold bowls, to Rome as a contribution to the war effort.[4] And further, a general appeal was made to the Roman citizens for contributions to be repaid by the government at a later time. According to Livy the consuls, in order to set an example

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1. Strong, 1966, p.5.
2. Pliny, XXXIII, 13, p.39. The first gold coin was struck 51 years later.
3. Livy, tr. B.O. Foster, London, 1929. See XXII, 52, 5, pp.371-373. Livy in recounting the defeat of the Roman army (216 B.C.) mentions that there was little silver to be had in loot, and that it was mostly on the harness of the horses.
4. Ibid., p.309.

for the senate, and they in turn for the people of Rome, agreed to contribute from their own personal effects. By this means they would initiate a rivalry, which they succeeded in doing, even among themselves.[1] The conditions of this appeal exempted the salium and the petella, or the saltcellar and a small dish[2] since these were the instruments used in making sacrifice to the gods and they must be reserved for that function.

The victory of the Second Punic War and the consequent Roman possession of the Spanish silver mines, plus the immense booty of Magna Graecia,[3] led to a great efflorescence of activity in the Roman metal workshops. It was virtually the turning point. Demand for domestic plate increased rapidly as well as that for collecting old plate, especially Greek made, an activity verging on mania among the wealthy citizens of Rome.

Silver plate assumed an importance in the Roman Empire in domestic, political and economic life that was without parallel,[4] and these collections only grew more

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1. Livy, tr. F.G. Moore, London-Cambridge, 1943. See XXVI, 36, 3-12, pp.137-139.

2. Strong, 1966, p.131. Petella is the diminutive of patera, the principal libation vessel of the Romans which generally preserved the form of the Greek phiale and its derivatives.

3. Livy (Moore), XXVII, 16, 7, p.275.

4. Frye, 1971, p.256. Frye observed that the Romans' need for more luxury (than Iran) was apparently very great, for foreign trade as well as home use.

impressive from the years of the late Republic into the Empire period. Laws were enacted restricting the use of solid gold and silver plate for private entertainment; however these laws did not extend to sacrificial use.[1] Pliny complains bitterly about the ostentatious and inappropriate application of the precious metal: for the brooches of the tribunes, worn on the feet of women, encircling the iron rings worn by slaves (the ring a symbol of captivity), and so on.[2]

Silver plate was used as a form of investment, stored wealth put to practical use. In theory this was not unlike the use of the temple treasuries of Greece: goods held in trust and put to service in making sacrifices and in celebrations, liquidatable in times of urgent need. Not only the wealthy business men, who certainly exerted a competitive consumer demand on the workshops, avidly sought to own silver plate; it has been recorded that slaves as well had large collections.[3]

The workshops thrived under conditions of a continuous supply of metals and undiminishing consumer demand both for home consumption and for a brisk trade abroad. Predictably, in such circumstances the repertoire of forms and range of techniques expanded to satisfy this

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1. Tacitus, The Annals, I-VI, tr. G.G. Ramsay, London, 1904, p.131.
2. Pliny, XXXIII, vi, p.21.
3. Ibid., II, p.109.

market.[1] Production of silver plate on such a scale led inevitably to the development of mass production methods and a high degree of specialization evolved among the craftsmen. Many craftsmen were so specialized that they would never have employed a full range of smithing skills even if these had been learned.

The lathe, which had been put to limited use by the Greeks by the 4th century,[2] was used to develop production line methods for rapid manufacture of vessels (by spinning rather than the more time-consuming method) as well as in rapid refining of castings.[3] Soft alloys were utilized for cheaper and more rapid production.

The 1st century A.D. is the best documented century for Roman silver largely due to the two great treasures, the Boscoreale,[4] and the more recent find, the Casa del Menandro.[5] Both of these great collections were buried in volcanic ash at Pompeii with the eruption of Vesuvius in 79 A.D. While these two collections, containing 109 and 118 pieces respectively, are impressive both in size

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1. Ibid., XIVIII, p.105ff.
2. Maryon, H., "Metal Working in the Ancient World", American Journal of Archaeology, 53, 1949, pp.93-125. Piggott places the date for the early use of the lathe far earlier: see S. Piggott, Ancient Europe, Edinburgh, 1965, p.169.
3. Strong, D. and Brown, D., Roman Crafts, London, 1976, p.35.
4. de Villefosse, H., "Le Trésor de Boscoreale", Monuments Piot, V, 1899-1902.
5. Maiuri, A., La Casa del Menandro, Rome, 1936.

and quality, it should be recalled that they represent family collections of wealthy provincials. As such they serve well to suggest the proportions that must have been assumed by the sumptuous urban collections for which we have but indirect evidence.

The emphasis on ownership of silver plate for the sake of prestige led to a new category of plate which was intended solely for exhibition, being generally displayed on side tables in the triclinium.[1] Within this class were the picture dishes, a Roman invention, on which the entire field was worked in relief, such that it was read from a single position, though this in itself was not a new idea. This class of plate was to know a long history in many cultures. The imperial picture dishes fall into this class, but function additionally as court propaganda art, with the emperor himself pictured within the scene. These were the finest commemorative plate, a class which continued as the so-called largitio plate.[2] These plates were distributed on the occasion of the imperial anniversaries, and form an important class of late Roman plate.

The emblema and medallion bowls were another important group of plate, frequently intended as show plate, and

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1. Strong, 1966, p.130. Among the pieces of the Casa del Memandro treasure was a stand (no.117) for exhibiting show plate.
2. Kent, J.P.C. and K.S. Painter (eds.), Wealth of the Roman World AD 300-700, British Museum, 1977, p.24.

related in form to the phiale.[1] This class of vessel came into prominence in the early Hellenistic period, and became increasingly popular in the last two centuries B.C.[2] One of the earliest examples of emblemata is a provincial product, made in silver and found at Santisteban de Puerto (province Jaén) with objects of the late 3rd to the 2nd century B.C. period (Fig. 1).[3] Though the scheme is similar to a 5th century phiale, the omphalos has an emblema which has been interpreted as depicting a wolf's head, the animal apparently holding in its jaws a human head. It has been said that this configuration represents Heracles, and is, according to García y Bellido, similar to the paterae of Tivisa.[4] A serpent knotted in ample coils lies to either side of these two heads, animal and human. The schemes of the two friezes, inner and outer, are after Hellenistic themes handled in a provincial manner, and have no doubt a magical or mythological significance. A narrow band of bead-and-reel motif separates the inner friexe of erotes

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1. Luschey, H., Die Phiale, Bleicherode am Harz, 1939, p.16.

2. Strong, 1966, p.111

3. García y Bellido, A., Esculturas Romanas de España y Portugal, Madrid, 1949, pp.464-467, pls. p.344 (separate vol.).

4. Ibid., p.465. See Ráfols, Ampurias III, 1941, pls. V and X.

from the major outer frieze which is subdivided into nine parts. These divisions are established by nine tree trunks minus their crowns and set on plinths. These suggest asherahs. Nine spritely male and female centaurs prance clockwise around the emblema, bearing different attributes. Among those surely identifiable are a double flute and harp.

The Gundestrup cauldron (Figs. 2,3,4) rightfully falls into the category of emblema bowls (more obviously so if one sets aside the plaques added to the upper rim). On the emblema set in the bottom of the bowl there is a bull lying on its side being assailed from behind by a diminutive figure wielding a sword (Fig. 3).

Emblemata, frequently of gods or goddesses, were later worked in portraiture and in pairs. The most valuable examples of this form have been recovered in the Boscoreale, Hildesheim[1] and Berthouville treasures.[2] The Africa bowl of the Boscoreale treasure, presumably a personification of the continent, the others not surviving, is a high relief version of a female portrait.[3] The figure is holding a cornucopia crowned with a crescent moon. She herself is crowned with the uraeus-snake.

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1. Pernice, F. and Winter, F., Der Hildesheimer Silberfund, Berlin, 1901.

2. Babelon, E., Le Trésor de Berthouville, Paris, 1920.

3. According to Strong (p.151, note 3, and pl. 38B) the head has been identified as a portrait of Cleopatra VII (Libyca, ii, 1954, 49ff).

Miniature representations of animals fill the surrounding space. The shallow bowl of the Hildesheim treasure is an exquisite full-figure relief, almost in the round, of Athena seated. A second high relief medallion is of Heracles strangling two snakes. The silver bowl of the Berthouville treasure, dated to the first half of the 1st century A.D., is a fluted medallion phiale. On the medallion there is an image of Omphale lying on Heracles' lion skin, possibly in reference to the occasion when each exchanged their clothing for that of the other.

The characteristic Roman sacrificial vessel, the patera, became common in bronze with the 1st century A.D., though no silver examples can be dated to this period.[1] The patera has a straight horizontal handle with a length approximately equal to the diameter of the pan, and an omphalos or medallion in the centre of the vessel. In the Augustan period the handle has two swans' heads as the integrational members joining the handle to the vessel at either side. This theme is repeated at the terminus of the handle, with long swans' bills sliding down each side of the handle. A noted manufacturer, one Tribellius Romanus, engraved a thyrsus, an attribute of Dionysus, on the handles of his wares.[2] Its presence is difficult

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1. Strong, 1966, pp.158-159.

2. Lamb, W., Greek and Roman Bronzes, London, 1929, p.244.

to explain as this symbol was also found used by other firms, and thus cannot be considered a trademark.[1] The later examples of this vessel have a handle which terminates in a rimed or outlined disk which has a centre hole, which is also rimed or outlined. This form lasted until the 2nd century A.D.

BEYOND THE FRONTIERS

The demand for plate beyond the frontiers of the higher civilisations began at least by the Hallstatt period. It has been suggested that it was probably linked to the wine trade which developed with the northern tribes.[2] The importation of wine led to a demand for the cups, mixing bowls, buckets and strainers which were necessary to complete the elegant form of this acquired social custom. The use of plate as a diplomatic gift and for the payment of tribute continued for centuries, though in later times this was increasingly confined to eastern Europe, and ultimately essentially to Russia.[3] And it is from this area, notably Thrace and from the

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1. Ibid.

2. Piggott, S., "A Late Bronze Age Wine Trade?", Antiquity, 33, 1959, pp.122-123.

3. Frye, 1971, p.260. Russian medieval chronicles dealing with the trading city of Novgorod confirm that inhabitants of the Upper Volga and Kama Rivers used silver vessels almost like currency.

Scythian burials in the valleys of the Dnieper, Kuban and elsewhere in South Russia, that the most outstanding examples of phialai have been recovered rather than from within the centres of higher civilisation. For the Greeks the phiale was not a customary burial item.

This same condition is as true for the 4th-5th century period, the date of the greatest treasure finds in Gaul, central Europe and in Britain. Frequently these burials of treasure are datable to a specific invasion.

Graves burials such as that yielding the two phialai of the Treasure of Vix in Gaul, dated to the last quarter of the 6th century, are among the oldest evidence of their category of metal forms (Fig. 5).[1] Similarly, in the east in the area of the Black Sea, tomb burials in Thrace, South Russia, and as far eastward as the valley of the Oxus (Fig. 6)[2] have yielded large amounts of early plate in gold, silver and bronze of both Greek and Persian origin. This accumulation of treasure, buried with the tribal chieftains and their consorts, was largely due to the religious beliefs of these peoples who envisioned an afterlife and the continuation of at least some social ceremonies, among them wine drinking.

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1. Joffroy, R., Le Trésor de Vix, Paris, 1954.

2. Dalton, O.M., The Treasure of the Oxus, London, 1964.

During the late Roman Republic and early Empire period, silver was used more for domestic goods, while gold was used for payment in trade carried on with eastern sources for luxury goods. Thus Rome became a collecting centre for gold.[1] Traditionally India demanded gold in trade payment, and thus had long been the gold collecting centre of the east.[2] Silver was available in both the east and west to pay for a wide range of raw materials from beyond the frontiers northward: tin, amber, furs, wax, honey, and from the lands west of the Black Sea: vast stores of wheat and fish. Metal plate to meet the demand of the Scythian and Thracian leaders was met by goods exported directly from Greek cities as well as goods manufactured in colonial workshops where articles were also produced in variations modified to suit local tastes. At least some smithing skill was thus bred into the local population from which recruitment in the form of unskilled labour was surely made.

Silver objects became a traditional gift of state among both the Persians and Romans. In the Achaemenid court this fact is recorded on the bas relief carving

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1. Frye, 1971, p.257.

2. Ibid. It is also true that Rome traded bronze and lead in bulk to India, who lacked them, for precious stones and spices. See M.P. Charlesworth, Trade Routes and Commerce of the Roman World, Cambridge, 1924, p.88.

of the Apadana at Persepolis on which Syrian tribute bearers are shown carrying, among many other gifts, deep-bowl phialai, amphorae with animal handles and spout, and bracelets terminating with protomai.[1] At the annual feast given by the Achaemenid king for his court on his birthday, the tukta, plate was one of the usual forms of gift.[2]

The earliest Persian vessel recovered in Thrace (at Koukouva, Mogila, Bulgaria) is a silver animal-handled amphora with a spout handle, dated to the first quarter of the 5th century. The oldest Persian phialai date to the early 5th century.

In the Roman sphere Tacitus, writing in the 1st century A.D., states that the Germans had a preference for silver over gold, since they were in need of a cheaper coin for the low cost goods they could purchase in trade.[3] Even if the reasons were more complex than Tacitus was able to assess, the fact stands that silver plate was by that time within their possession, as he observed, though carelessly treated as if it were but earthenware. Since they lacked the traditional pride of

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1. Ghirshman, R., Iran, Harmondsworth, 1978, p.20, view b.
2. Herodotus, IX, 110, p.289.
3. Tacitus, The Agricola and the Germania, tr. H. Mattingly, Harmondsworth, 1971. See Germania 5, pp.104-105. Continuing on the subject of gifts and trade, he says (15, p.114), "They take particular pleasure in gifts received from neighbouring states, ... choice horses, splendid arms, metal discs, and collars...."

ownership which evolves with the expansion of this craft, the product of an affluent society, this is not surprising.

Overall, however, in terms of sheer volume, the amount of silver and bronze ware found northward of the frontier in Europe is impressive, and most of this can be accounted for as the product of 'commercial drift', items moving from market to market, individual to individual, even when allowance has been made for diplomatic gifts or military and tribal movement.[1] In the sphere of bronze alone, more than 850 vessels have been found north of the Roman frontier and about one half of these have been found in Jutland and the Baltic Islands.[2] A considerable portion of those were manufactured in Capua,[3] inexpensive vessels of an everyday sort, paterae and the so-called 'poorman's bucket'. The high point in Capum industry was the late 1st century A.D. After this time manufacturing sites in the provinces started replacing this trade in Gaul and in Germany. Then the 'Hemmoor type' bucket is found, named for the site where many were found.[4]

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1. Wheeler, (Sir) M., Rome Beyond the Imperial Frontiers, London, 1954, pp.177-178.

2. Ibid., p.72.

3. Ibid., p.73.

4. Lamb, 1929, pp.244-245.

CHAPTER III

VESSELS

THE PHIALE

The phiale, the celebrated libation vessel of the Classical and Hellenistic periods in both the Greek and Persian spheres of influence, has an ancient history. It can be traced back through preceding centuries in Assyria and Egypt at least to 900 B.C. and it had far older predecessors.[1] The form of the phiale is essentially that of a simple bowl with a rosette in the centre and it may or may not have the umbo present, the feature that later characterizes the phiale mesomphalos. Examples of the phiale have been found in a wide range of materials: gold, silver and bronze, and also - though rarely - in tin, or lead, and in clay. A few exceptional examples have been found in limestone, steatite, wood and glass.[2]

Both the Egyptian and Assyrian cultures produced vessels in various metals and in clay, having a lotus motif or a rosette traced, embossed or painted on the bottom of the bowl. Both the lotus and the multiple-petalled rosette, which is derived from the fully

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1. Luschey, 1939, p.114.

2. Ibid., p.22. For examples in limestone see Abb. 38, steatite 39, and glass 40.

expanded lotus bloom and had the same significance,[1] are sun symbols. The Luristan situla, too, is characterized by having a lotus motif on the rounded or shield-shaped bottom from which flutings radiate upward (Fig. 54).[2] Nor was this treatment of the situla exclusive to Luristan, being one shared by peoples in adjacent areas, but received ultimately from Assyria. An early form of the phiale in both Egypt and Persia was as a deep bowl, which in Persia evolved towards a shallow vessel at least by the late 6th century, usually with omphalos in the centre. The deep bowl was also produced in later centuries (Figs. 28, 29). Examples of the phiale from the Greek world in the Classical and Hellenistic periods are also shallow and with an omphalos.

The importance of the phiale in its application as a cultic vessel far exceeded its use as a drinking vessel.[3] It was used in rituals for many different purposes: asking for blessing or for good fortune,[4] thanksgiving,[5] or for fertility,[6] and in the celebration

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1. Ackerman, P., (ed. Pope), Survey of Persian Art, 6 Vols., I, London-New York, 1938, pp. 367-376.

2. Amiet, P., Collection David-Weill, Les antiquités du Luristan, No. 79, 1976, p.51.

3. Luschey, 1939, p.7.

4. Pindar, The Odes of Pindar, tr. C.M. Bowra, Harmondsworth, 1969. See Pythian IV, 9, 190f, p.197.

5. Herodotus, I, 50-52, p.17.

6. Pindar, Isthmian VI, 2, 36, p.43.

of a wedding,[1] an athlete's victory,[2] and as a prize for victories of many sorts. Also they could be used in advance of contest, as in bidding farewell to soldiers going to battle. They functioned as gifts of state, gifts within the court, for services rendered and as a vessel to hold the ashes in a cremation type burial.[3] The temple inventories of Greece record vast quantities of phialai donated to the treasuries there, to be catalogued and stored (see Appendix I). On occasion they were used in sacrifices or celebrations along with great mixing bowls supported by tripods, these being also temple offerings. The Temple of Delphi held the goods of numerous city states in differently allocated spaces within the temple precincts.[4]

Thus the phiale was a ritual tool with many nuances of application, used before, during and after major events, and on official and public occasions as well as in private sacrifice.

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1. Ibid., Olympian VII, 1, 1f, p.164. Note by translator, 1-10, p.168.

2. Pindar makes several references to gold and silver cups as trophies of athletic events: Nemean, IX, 11, 51f, p.120; Nemean X, 3, 43, p.178; Isthmian I, 2, 1f, pp.141-142.

3. Filow, B., Die Grabhügelnekropole bei Duvanlij, Sofia, 1934, p.63.

4. See Godley's note 2 on p.18, Herodotus, I.

The phiale, along with other forms of plate, attained an importance as a donation item, a votive offering to the gods. Secondarily the phiale (as the treasury holdings generally) gained an outright economic value, functioning virtually as specie. These goods could be liquidated in time of crisis; thus the temple treasuries functioned as reserve banks.[1] Much of our information about the contents of the temple treasuries and showrooms in which these treasures were displayed has been obtained from the annual inventories. These reports were made by boards of appointed officials, at Athens they were described as "the stewards of sacred moneys".[2]

The phiale provides a useful category of object to examine for stylistic changes and the ever-enlarging repertoire of metal vessels which developed over these centuries in the Mediterranean world. The phiale was produced by all the methods of vessel formulation: raising, use of die, casting, and spinning. The surface and form, though at first simple, became increasingly complex. Ultimately the phiale reached a baroque decorativeness in which it approached the class

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1. Homolle, T., "Inventaires des temples Déliens en l'annee 364", Bulletin de Correspondance Hellénique, 10 (1886), pp.461-475.

2. Rouse, W.H.D., Greek Votive Offerings, Cambridge, 1902, p.344.

of show plate (some probably were) before disappearing from view entirely. In the late Roman patera some of the characteristics of the Greek phiale and its derivatives continued, however its uses have not yet been established.[1]

Techniques and Metals Used

The relief phiale of the late 5th century are few in number, executed skilfully by chasing, hammering over a mould, and by casting. The technique of engraving, frequently with the added feature of gilding, had only a brief period of popularity in the late 5th century (Fig. 27) while repoussé and chasing techniques continued to be explored into the 1st and 2nd century A.D. period when soft alloys were favoured by Roman craftsmen which they worked in an exuberant baroque manner. In some outstanding examples the surface has been raised and undulated to such extravagant heights that it appears to have three dimensional forms literally attached at one small area, as on the drinking cup of the Casa del Menandro Treasure (Strong, pl. 33A). Such developed prominences, being extremely fragile, frequently had to be infilled with lead to increase their durability. The cup itself required a simple liner or interior shell in order to make it usable. This shell was soldered to

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1. Strong, 1966, p.131 and p.145.

the cup at the rim. The cross-over point was reached when this highly articulated surface no longer satisfied the objective desired. Still greater height and additional effects were attained by adding cast parts which were soldered into place on the surface in among the chased motifs.

The metal chosen for such virtuoso chasing exercises was silver which is far superior to gold for such work. This is not due to the difference in working properties of the two metals, but the capacity of a silver alloy to patinate. Pure silver (fine silver) does not oxidize, but this is rarely used for creating a total form. Silver is usually combined with copper in order to produce a more wear-resistant alloy; 7.5% copper to 92.5% silver by today's sterling standard. However, as the percentage of copper is reduced, the alloy becomes increasingly soft, more ductile and malleable, and hence more easily chased to greater heights and depths without danger of cracking.

The patina that develops naturally on an object made from a silver alloy establishes the contours and gradations of change. These can blend the images with a sense of space. Gold, which has no appreciable factor for patination, remains monochrome indefinitely. Artificial patination of gold can be obtained easily by the use of iodine, but chiaroscuric effects have never been an objective of the goldsmith, while they have

been heavily exploited at some periods by the silversmith. Pliny observed that the art of chasing gold had brought celebrity to no one whereas persons celebrated for chasing silver were numerous.[1]

Significance of the Phiale

In the Greek world the pouring of libations, offerings to the chthonic and non-chthonic deities who dwell in the world below is demonstrably one of the oldest forms of worship.[2] It was practised from the Mycenaean to the Classical period without a break. The phiale is well documented in the Greek and Roman world, evidence being found in inscriptions, literary references,[3] temple inventories,[4] wall paintings (Figs. 7,8),[5] vases (Fig. 9),[6] relief carvings,[7] and

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1. Pliny, XXXIII, 55, p.115.

2. Rouse, 1902, p.2.

3. Herodotus, IV, ix, 80, p.253f.

4. Homelle, 1882, 1886; Payne, H., Perachora I, Oxford, 1940.

5. Vassiliev, A., The Ancient Tomb at Kazanluk, Sofia, 1960. These tomb murals, dated to the late 3rd century B.C., are of the funeral or farewell banquet. Vassiliev has mistaken the phialai depicted for glass bowls. See Venedikov, 1975, pls. 85-89.

6. Metzger, H., "Dionysos chthonien d'après les monuments figurés de la période classique", Bulletin de Correspondance Hellénique, 68-69, 1944-45, pp. 297-339.

7. Rouse, 1902, pp.19-36.

sculpture in the round (Fig. 10).

The phiale can best be considered as a category of vessels which is endowed with cultic significance and put to a variety of ritual purposes. The central feature of a rosette, umbo, and later the emblema reveal a steady focus on the central portion. One or other of these features is invariably present, whether the phiale is with or without handles. The size, profile, and proportions change over long periods, as do the applications and actual manner of use of this vessel.

The phiale had a prominent place in everyday life and in pouring libations in the worship of the dead. An unusual use was as a funerary urn.[1] It was used to hold both liquid and dry food,[2] just as it was, in some restricted uses, set on both faces.[3] The phiale was applied symbolically as an architectural element[4] and phialai, like other forms of offerings, were attached to stone bases.[5] Thus, in effect they were transformed

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1. Ibid., p.12. Also the Iliad, tr. T.A. Buckley, London, 1861. See XXIII, p.425.

2. Athenaeus, V, xi, p.193.

3. Ibid., p.241. In defining vessels: "But it can also mean 'the vessel that is set both on its stem and on its brim'; and this mode of setting the phialai is Ionic and ancient. At any rate the people of Massilia to this very day place the phialai face down."

4. Luschey, 1939, p.16. Luschey speaks of the application of ornamental phiale on architecture as a decorative element placed on the roofs and doors, and in a frieze with garlands and omphaloi.

5. Homelle, 1886, p.470.

into sculpture, stationary objects to be viewed, divested of their actual utility. The association of this vessel with the pouring of libation, however, remained its defining purpose overall, though certainly much of what was stored in temple treasuries remained forever simply stored wealth.

The pouring of libation was a prominent feature of the ancient Greek ancestor-hero cult worship, both at the time of burial and in the periodic or annual renewal of feasts at the tomb.[1] From this deification of the founders of the race, not unique to the Greeks, sprang the hero-worship cults. In the pictorial evidence of these beliefs the phiale is a recurring form. In Rouse's study on this subject the material evidence (for which he used the category of relief carvings) has been divided into four groups, which do have some overlapping.

In brief, the four groups and common themes with variations were as follows.[2] In the ritual of the hero enthroned, the heroized pair are seated upon the throne (see Fig. 7), or the female stands and pours a libation. In the second group the hero is shown reclining or partaking of a feast, a type known as the hero feast or the death feast. In an example of this type, a 5th

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1. Rouse, 1902, p.4.

2. Ibid., pp.19-36.

century relief from Peiraeus,[1] the reclining hero holds forth a phiale mesomphalos towards a seated female figure. In a second example the hero holds a rhyton aloft in his right hand and a bowl to his chest in the left.[2] In the third group the hero is depicted as a rider, or hunter, with a horse present. In a 5th century example from Cumae a youthful rider appears clad in a chlamys which is billowing out behind him, and the heroized wife is standing in the background.[3] Both the rider and hunter hero become connected with the tomb stele by the 5th century. Later, the Dioscuri are in this same scheme,[4] as in the hunt scene with altar, tree and snake. Also, in one variation of this third type, the hero appears holding a cornucopia which becomes a characteristic form combined with a thank-offering motif for victory.

In Thrace this latter type, the hero on horseback, is common in the later period and in Roman times is inscribed 'to the lord hero'. The hero rides or stands with dog, altar, tree and coiling serpent present (Fig.

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1. Ibid., fig. 3, p.21.
2. Ibid., fig. 4, p.23.
3. Ibid., fig. 5, p.24.
4. Chapouthier, F., Les Dioscures au Service d'une Déesse, Paris, 1935, p.320, concerning the Dioscuri and their relationship to the underworld.

11).[1] In the variation without the rider mounted, the Dioscuri are again present. The chthonic figures closely allied with this type of worship include Hades or Pluto who has more of the heroic than the divine in his nature in some of his portrayals,[2] as with Persephone, and who is later assimilated to the Dionysus image.[3] Heracles appears in virtually all these types, in some with a quadriga and horses rather than as a rider.

In the last group the horse is not an integral part of the scene. The hero is associated with references to a ritual act, as a female figure pours a libation, or the hero is giving a libation to a snake.

The image of the phiale is present in all of these groups outlined in relief carvings as it is also present, depicted or modelled, in other categories of art works. Looking to evidence particular to the theme pursued, namely the application of the phiale used as a

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1. Cook, A.B., Zeus, Vol. II, Cambridge, 1925, p.282.

2. Rouse, 1902, p.28.

3. Metzger, 1944-45. Metzger attributes the lack of literary reference to the associations with the underworld to the fact that the Dionysus cult did not have official sanction. However, the evidence can be read in the art of the 5th century. The assimilation of Dionysus to Pluto is to be found in the art of central Greece and in Attic art.

ritual form, the phiale is found in the following situations: 1) hero enthroned holding a phiale as in the wall paintings of the Kazanluk Tomb in Thrace (Figs. 7,8); 2) hero feast as with Heracles and other figures depicted in the inner frieze of the relief phiale (Fig. 12),[1] and the Pluto-Dionysus figure in the vase painting (Fig. 9); 3) hero with the horse (and here with the chariot) on the outer frieze of the same relief phiale; 4) hero figure as found in the bronze statuette of the Lar type (Fig. 10) (the Lar derived from the household deity of the ancestor-cult worship).[2] These examples will be discussed more fully within the text.

The Ritual Use of the Phiale

Phialai have been produced with the more important 'face' being either the interior view or the exterior view. In some cases neither view is given precedence or greater visual importance, both having been finished independently with equal care and given an equal weight of symbol. Early examples of painted clay phialai such as the one in the Berlin Museum with a procession of

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1. Richter, G.M.A., "A Greek Silver Phiale in the Metropolitan Museum", American Journal of Archaeology, 45, 1941, pp.363-389.

2. Waites, M.C., "The Nature of the Lares and their representation in Roman Art", American Journal of Archaeology, 24, 1920, pp.241-261.

swans[1] (or aquatic birds of some sort) as the interior frieze, or the swastika[2] painted in the interior bottom, were obviously read on that 'face' as is true of the relief phialai of 5th century Greece. The early 7th century griffon-bowls from Perachora[3] are decorated with a procession of griffon protomes on the exterior radiating from the omphalos.

In the deep-bowled Achaemenian-type phiale with full swelling bosses, the motif no longer lies on the surface. Here the motif has been translated into a plastic structural language expressed in the form itself. Obviously the exterior took precedence over the interior. However, the flat, open phiale of the Oxus Treasure (Fig. 6) and that from Ünye also have the images on the exterior, which requires reversing in order to see. The type such as the two gold chased phialai of the 3rd century introduced here, the gold phiale (Fig. 13) and the Panagyurishte (Figs. 14, 15), are examples of shallow bowls with extravagantly developed surfaces which, in order to see, again require reversing. (In the interior view one sees only the back-side of the worked metal.) On the flat, open egg-phiale of the later period, the interior view is developed as the more important one.

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1. Luschey, 1939, fig. 9, Berlin Museum Inv. 3290.
2. Ibid., fig. 10.
3. Payne, 1940, p.150, pl.51.

The deep, large cups or egg-shaped concavities were worked from the front, while the remaining surface was worked from behind. On the silver example from Paterno, now in the Staatlich Museen in Berlin, a second piece of ornamental work has been superimposed on the front surface.

Thus, height is not a criterion; both deep and flat, open phialai have been produced with the imagery developed on the exterior. Apparently there was no traditional attitude as to which surface was to be dominant visually in this class of vessel. This factor appears to change back and forth from style to style, period to period, first the interior bearing the visual message and then the exterior.

More curious are the phialai with two quite similar faces, neither visually dominating. Examples of the 6th century Greek lotus phialai were recovered at Perachora which were formed of two thin layers of bronze with a reinforced rim.[1] Each of these layers was worked separately and then the two were joined to the rim, the boss being formed separately. This type is more rare overall compared with the simpler and less costly phiale made of a single sheet or even ones to which the boss has been added; this in itself is not an uncommon feature.

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1. Ibid.

Luschey asserts that actual phialai were placed on the exterior of buildings;[1] it is well known that shields were (Figs. 16, 17).[2] Luschey cites the metaphor of Aristotle[3] which is after Timotheus who called Nestor's shield (not his cup, which also had great importance for him), 'the saucer of Ares'.[4] Aristotle has, by way of defining what a metaphor is, used this example and said, 'for instance, if a drinking bowl is a shield of Dionysus, a shield may fitting be called the drinking bowl of Ares'.

Luschey has been criticized[5] for suggesting that actual phialai were placed on the temple walls and thus established a parallel (Luschey's word) in meaning to the shield. Setting aside that issue, and returning to

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1. Luschey, 1939, pp.15-16. Luschey interprets Pausanius (Vol. V, 10, 4) as having said there, phialai placed on the exterior of the Temple of Zeus at Olympia.

2. Athenaeus, V, xi, p.15. Athenaeus quotes Polemon in his book On Morychus, saying that at Syracuse, it was the practice for the crew of a departing vessel to watch the shield on the Temple of Athena until it was no longer visible. At that moment they made a sacrifice of flowers and spices into the sea.

3. Aristotle, The Works of Aristotle, tr. W.D. Ross, Oxford, 1924. See Vol. XI, Rhetorica, III, 4, 15.

4. Athenaeus, IV, p.463. "And among all heroes his (Nestor's) cup only is described, like a shield of Achilles .... One would make no mistake if he called Nestor's cup 'the saucer of Ares'."

5. Dohan, E.H., review of Luschey's Die Phiale, in the American Journal of Archaeology, 45, 1941.

Aristotle's metaphor, one finds ample grounds for its use; the shield and phiale do have several important similarities. However, these forms are not interchangeable.

Both of these forms were standard temple offerings from very ancient times.[1] The shield and the phiale both functioned as life-protecting devices, one physical, the other metaphysical. Both the shield and the phiale were used to commemorate victories of physical contest, the warrior leader dedicating his shield or captured shields,[2] while the phiale was given to the individual in athletic contests. These prizes were in turn frequently dedicated by the victor to a sanctuary as a thank-offering. At the metaphorical level, the similarities are well supported by evidence of long-standing traditions as found in inscriptions, temple inventories, and on inscribed forms.

The cultic significance of the phiale as a vessel used in rituals with life-promoting and life-protecting purposes finds equations in themes of victory, fertility, renewal or continuity of the life cycle. By the 5th

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1. Temple inscriptions and temple inventories are the earliest sources of information. Van Loon (p.85) lists the temple goods taken by Sargon in his raid on Musasir in the late 8th century which included vast amounts of shields "25,212 large and small copper shields, copper crests, copper hauberks, etc....." (Van Loon, M., Urartian Art, Istanbul, 1966).

2. Rouse, 1902, p.151. "...on the same principle which suggested the consecration of war-spoils, the victor often made an offering of his prize."

century, immortality, the ultimate victory over death, is a theme also associated with the phiale.

Placement of the Phiale

Little is known about the ritual handling of the phiale during and after use. The method of handling must have been different in order to accommodate the range of diameters, depths and absence of boss in some cases. Von Bothmer describes the presumed method for the average to small-sized Greek phiale, which is held in one hand.[1] The thumb is hooked over the rim and the two middle fingers are inserted into the hollow of the boss. When the radius exceeded the size of the palm, it clearly could not have been held in this way. The earlier Greek phiale, the Homeric basin, was wide and shallow, but equipped with two handles to facilitate lifting.

There is an interesting discussion about the phiale in the writings of Athenaeus.[2] It begins with a debate establishing the nature of the two-handled Homeric basin type and differentiates it from the later phiale:

> When Homer says[f] "he set as a prize an amphithetos phiale untouched by fire", and again, "A golden phiale and double-folded fat", he is not speaking of the cup known as phiale, but of a flat, basin-like vessel of bronze, probably having two handles

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1. Von Bothmer, "A Gold Libation Bowl", Metropolitan Museum of Art Bulletin, 21[8], 1962, pp.154-166.
2. Athenaeus, V, x1, pp.239-241.

> extending from both sides. But Parthenius, the disciple of Dionysius, understands by amphithetos the vessel that has no stem. Similarly, Apollodorus of Athens in his little speech On the Mixing-bowl says that it is the vessel that cannot be set up and supported firmly on its stem, but only on its brim .... But Aristarchus explains that it means the vessel which can be set down on both sides, on the bases or on the brim ... Then as to the adjective amphithetos, are we to imagine that it means "having two bases", one at each end, or does the prefix amphi signify the same as peri, which in turn means "extraordinary"? ... But it can also mean "the vessel that is set both on its stem and on its brim"; and this mode of setting the phialai is Ionic and ancient. At any rate the people of Massilia to this very day place the phialai face down. (f, II, xxiii, 270)

If Athenaeus can be admitted as a valid source of information on the subject, it appears that either face of the phiale could be exposed, at least in some places and at some periods.

Summary of Characteristics

Luschey's study remains the most complete outline of the phiale in terms of the archaeological evidence and citation of indirect references. He has categorized phialai into eight classes on the basis of decoration, though some hybrid forms defy placement, having important features of two classes. These classes in themselves can give no hint of development, since both form and subject matter were used, abandoned, only to be repeated centuries later in other cultural spheres. Such is the case with the frieze type of 8th century Phoenicia which is produced in 5th century Greece (see p.75). The range of imagery itself is relatively narrow. In the early

non-Greek examples formal animal processions, sometimes with human figures included, are common while in the Greek relief phiale the emphasis is on god and goddess figures. There the animal imagery included is mainly in the form of the animal attributes of these god figures.

However, overall by far the greatest number of phialai, of all periods and locations of manufacture, are aniconic forms. The centre is always the powerful focus and the motifs are subordinated to a strict concentricity. This in turn is controlled by vertical divisions radiating upward to the rim. The relief phiale is commonly the outstanding exception. This concentric and vertical division results in a formalized and strictly measured space. The only developed examples of overlapping planes producing some depth of perspective, and this is very limited, are to be found in the Greek relief phiale. Otherwise, a single plane has been established upon which symbols have been placed, though they may be three-dimensional themselves. The closely packed surface of the gold phiale (Fig. 13) and the Panagyurishte phiale (Fig. 14) can be looked upon as a textural development which, as a unit in itself, expresses the idea of growth. It is not a kind of imagery that requires examination of the entire surface; one wedge-shaped segment from the disk will do.

The plant motifs most commonly found on the phiale are few in number. They include the lotus, acanthus,

ivy, laurel, and the nut of the oak and beech. Possibly the date-palm should be included; certainly the stylized palmette can be recognized. All of these plants and trees are associated with gods and goddesses, or have an important symbolic nature independently.

Of all forms of iconography, it is the lotus flower which is most constant, whether seen in profile, gathered into a group, in top-view as the rosette, rendered naturalistically or suggested by a few, dry lines or abstracted into its constituent elemental parts.[1] The image of this flower, combined with fluting as a means of contouring, are repeated in combination for centuries, at times restrained and superficial and at others as deep swelling concaves. For the development of the Achaemenian phiale, Ackerman's interpretation is especially useful as it outlines the evolution of the treatment of the lotus flower which undergoes a high degree of abstraction.

The lotus, which seen from above is a rosette, the treatment of fluting, and the boss, all characterize the phiale mesomphalos. The phiale changes in height, width, proportion, profile and surface treatment. In its most austere version the lotus (or any segmental reference to it) and the fluting are set aside, but the boss is present. When there is no boss, the rosette is substituted.

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1. Ackerman, 1938, see Ch. 18, pp.367-376.

Early Examples of the Phiale

The earliest vessels with the central rosette feature in the Greek world which Luschey cites are dated to the 3rd millennium, as in the Euboea bowl now in the Benaki Museum in Athens,[1] and in the late Mycenaean gold vessel of the Aegina Treasure now in the British Museum (Fig. 18).[2] From Egypt such evidence is found in the flat-bottomed, steep-sided gold vessel whose inscription associates it with Thot III. The vessel, now in the Louvre has an engraved rosette central and is dated to the mid-2nd millennium.[3] Representative of the same period is the silver inlaid cup from Enkomi in Cyprus.[4] Niello and gold were used to create the image of the bull's head seen *en face* with great arching horns which line the walls of the cup and surround the *omphalos*. In Asia Minor the *omphalos* is found early in clay *phialai* and in two gold vessels from the treasure of Troy II.[5] In Assyrian examples, which Luschey sees as the bridging form to the Greek *phiale*, the middle rosette with a small boss is

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1. Luschey, 1939, p.31.

2. Higgins, R., *The Aegina Treasure*, London, 1979.

3. Daremberg, C. and E. Saglio, *Dictionnaire des Antiquités*, IV, see 1, p.434. The *phiale* existed in Egypt in the reign of Thoutmosis III. See von Bissing, *Jahrb. Inst.*, 1898, p.37.

4. Schaeffer, C.F.A., *Enkomi-Alasia*, I, Paris, 1952, Ch. VI, pp.379-389.

5. Luschey, 1939, p.31.

found by the 2nd millennium B.C.[1] The Syrian-Phoenician form entered the Greek world about 700 B.C. and strongly influenced the Greek phiale in form and use.[2]

By the 9th-8th century period examples are abundant in Assyria, Luristan, the coastal zone of Phoenicia and Tyre, Asia Minor, and Cyprus. On a bronze phiale from Luristan the small boss is surrounded by three concentric lines and has the flaring rim which will characterize the Achaemenian phiale.[3] A lotus flower-and-bud chain, a borrowing from Assyrian art, surrounds the boss.[4] Frieze type phiale of Phoenician manufacture was recovered in a tomb of the Kerameikos in Athens, and is datable precisely by the associated Greek work of early Geometric style.[5] On this bronze phiale, around a central rosette with swelling lobes, revolves a stately procession of animals alternating with human figures carrying tri-lobed blossoms. A plain bronze phiale found at Gordion dates

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1. Ibid., p.33.

2. Payne, 1940, p.151. The earliest examples of imported phialai in Greece and Etruria appear in the 7th century and are Phoenician. Further, the development of the Greek shape ran closer to that in North Syria than it did to the development in Anatolia.

3. Godard, A., "Les bronzes du Luristan", Ars Asiatica, 17, 1931. See pl. LXIII, 226 bis, bronze phiale.

4. Ibid., p.91.

5. Akurgal, E., The Birth of Greek Art, London, 1968. See fig. 103, pls. 39a and b, and 40, p.153.

to around 700 B.C. There are numerous examples of this type which lack any adornment other than the boss which is undercut and twice encircled. This austere form never really disappears, being reproduced as late as the 1st-2nd century period as seen in examples found in Pannonia. These examples are unadorned having only a small, neat rosette in the centre and no boss.[1] By this time the religious significance of the phiale has long since faded.

Evidence for the archaic Greek plate, for which a precise date is difficult to establish, is found in the gold phiale from Olympia, the Kypselid bowl (late 7th - early 6th century B.C.) which is now in the Boston Museum of Fine Arts (Fig. 19).[2] The bowl is rather deep for its width, with full, deep fluting. It bears an inscription recording its dedication by the sons of Kypselos of Corinth from the spoils of Kerakleia. The silver phiale from Ialysos, Rhodes with lotus ornamentation dated to about 650 B.C., is comparable in its general proportions.

From the tomb burial in Gaul, the Treasure of Vix, dated to the late 6th century, came two phialai both accredited to Etruscan manufacture.[3] The bronze phiale

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1. Radnóti, A., The römischen Bronzegefässe von Pannonien, Budapest, 1938, pl. XXX.
2. Bulletin of the Boston Museum of Fine Arts, 20, 1922, p.65ff.
3. Joffroy, R., Le Trésor de Vix, Paris, 1954, p.30, pl. XXIX.

with horizontal rim is the older, so-called Homeric basin type with boss which frequently has two handles. The silver phiale (Fig. 5) with vertical rim is completely unadorned except for the gold foil superimposed on the boss and held in place with rivets. Though many exist in bronze,[1] its nearest comparative is a fine example, the silver phiale from Maikop on the Kuban. The boss has been encircled with an anthemion, a wreath of laurel leaves. This recalls Athenaeus' comment that ivy sprays were on occasion tied about drinking vessels and mixing bowls.[2] The image of a bird's head with a great curling beak in the Scythian animal style is a later addition.

The cover to the great krater of Vix is a most interesting article which has several characteristics of the basin-type phiale (Fig. 20). It was constructed from a single sheet of bronze and has a diameter of 1.02 metres and weighs 13,800 kgs. In the centre of the basin is a cone-shaped pediment on which was soldered a bronze votive statuette intended to represent Artemis. From this centre radiate 24 petals inscribed by small round holes. An analogous krater cover with umbilicus was found at Trebenischte near Lake Ochrid in Yugoslavia

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1. Payne, 1940, p.150. Plain phialai have been found at most temple sites. See p.150 for a brief list of these sites.

2. Athenaeus, V, xi, p.81 and p.83.

(Joffroy, pl. XIX).[1]

The gold phiale of the Treasure of Oxus (Fig. 6)[2] reveals an animal style which appears archaic when compared to the prevailing Achaemenian type. It has been considered to be most likely a Median product. This is suggested by the manner of treatment of the musculature; the formality of the stance of the lions, rampant, and gardant; and the head which is treated three-dimensionally.[3] Van Loon supports Dalton's original interpretation, which some have challenged. He stresses the high degree of formalization which characterizes Median goldsmiths' work which remained independent of the strong currents of naturalism of Assyrian impulse.

These lion images stand separated by lobe-shaped bosses which, if Ackerman's view is accepted, represent the abstracted element of the lotus seed itself.[4] This same treatment of lobe or seed-boss with animals placed alternatingly is found in the silver phiale from Ünye,

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1. Payne, 1940, p.151, pl. 55, 1. Two examples of phiale with a cone or spike shape in the centre were found at Perachora. Payne remarks that the shape is found in clay at Lachish in the Late Bronze Age (note 6). This type has a parallel in Palestine (p.152).

2. Dalton, 1964.

3. Van Loon, 1966, pp.178-179.

4. Ackerman, 1938, p.371.

east of Samsun on the Black Sea, and dated to approximately the same period.[1] This phiale is unique in having been devised with an odd number of lobes, five, rather than the usual even number of six, eight, or many more. The winged ibex with its head turned looking backward reveals Caucasian-Iranian influence, the back legs hanging while the fore legs are pawing forward. This convention of weightlessness or 'hanging feet', as it has been called, is found in products of the Black Sea area.

Beyond the essential feature of the boss, and the use of the lotus and fluting, the relief phialai of 5th and 4th century Greece give the greatest amount of visual information. This tells us something about the religious beliefs which could be attached to the phiale, though they are not unique to that form. These themes are to be seen on painted vases as well and were popular generally in this period. In the Greek late 5th century silvered tin phiale, such as the example in the Metropolitan Museum (Fig. 12), one finds two friezes of figural images. In the dominant or outer one the theme of the Apotheosis of Heracles is depicted and on the inner frieze that of the arrival of Heracles at Olympus (See Appendix II). In the Èze phiale (Fig. 21) in the British Museum the Apotheosis theme is repeated, with the rim bordered by a vine of ivy.[2] An inner border of bead-

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1. Akurgal, 1968, p.218, pl. 67.

2. Walters, H.B., Catalogue of Silver Plate, Greek, Etruscan, and Roman, in the British Museum, 1921, pl.22.

and-reel motif separates the inner frieze of palmettes and lotus flowers. The imagery is blurred due to the fact that it has been cast from an original worked presumably in repoussé.[1] Examples in terra cotta have been found which were reproduced in this same way.

Following these centuries of production of the relief phiale, a few elaborate phialai of the later centuries carry out single themes in the imagery. Examples are the gold phiale now in the Metropolitan Museum of New York (Fig. 13) [2] - there are others of similar type - and the gold phiale of the Panagyurishte Treasure in the Plovdiv Museum, Bulgaria (Fig. 14).[3]

From the 3rd century B.C. forward the emblema begin to appear and become one of the characteristic classes of plate continuing into the first two centuries A.D. Following its development this form dissolves rather shortly into a secular work, and eventually even a personal one in the portraiture group, though the god and goddess imagery never really ceases. In fact a few of

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1. In order to make a copy by casting procedure, a clay mould can be made (two halves, front and back). The positive of this mould is made in wax. Any number of these wax duplicates can be reproduced and prepared for casting. See glossary for casting procedures.

2. Von Bothmer, 1962.

3. Venedikov, I., The Panagyurishte Gold Treasure, Sofia, 1961.

the most outstanding examples were produced as late as the 1st century A.D. such as the Minerva kylix of the Hildesheim Treasure.

Phialai recovered in Thrace

As has been previously mentioned, very little Greek metalwork of the Classical period has been recovered in Greece. The richest locations of discovery for such material have been the valleys of the Kuban and Dneiper Rivers in South Russia and in Bulgaria and southeastern Romania. The phiale mesomphalos was not used as a burial item among the Greeks as it was among the Scythians and Thracians. Thus, it is from the rich tumuli of chieftains of these peoples that the phiale mesomphalos of the Classical period is largely known. The practice of tumulus burial continued into the later Classical period in South Russia long after the Thracian power had collapsed.

It is difficult to assign a likely site of manufacture for many of the phialai recovered from these locations. Too little is known about the locations of the major workshops for this period generally. Stylistically they can be placed into three categories, Greek, Persian and provincial. Obviously examples of pure Greek or Persian style may have been manufactured in colonial or provincial workshops. Craftsmen moved freely during this period and worked to accommodate the taste of

their clients. The Persian style of the period was taken up by the Greek craftsmen as well. Many problems of the inter-relationship of these phialai types remain unsolved. The fact that the phiale was used as a form of diplomatic gift gave it wide distribution into the fringe areas of the higher civilisations. Also, since the phiale was a highly prized possession among the chieftains, it was a form which was attempted in even modest studios, judging by the poor quality of some of the recovered examples.

During the Classical period, when Greek toreutics expanded dramatically, the simple, smooth form of the phiale (such as the example found in the Treasure of Vix), began to evolve towards an increasing elaboration of surface treatment. This evolution towards an ornate, highly plastic relief, it should be recalled, was general in Greek toreutics in the later centuries of the B.C. era. The form of the vessel itself was shallow and tended to increase somewhat in diameter.

Generally speaking, the Persian phiale of the Classical period was a more complex category of vessel which had several versions. These can be subdivided, on the basis of height, as shallow, deep-bowled and long-necked. The body of the various phialai were fluted with simple grooves, reeded and with leaf patterns. The lobe-shaped ovoids continued in use at the shoulder of the bowl section. The shoulder of the bowl was usually

decorated with a band of guilloche or interlace patterns which separated it strongly from the plain rim. Sometimes the flaring rim section was engraved, but it was never articulated into relief imagery. This contrast of the enriched bowl section with a smooth flaring rim rising from it gave the form a strong vertical thrust visually. The Greek phiale did not have a parallel to this Persian deep-bowled variation.

The profiles of the Greek and Achaemenian shallow phialai mesomphalos have distinguishing characteristics. The Greek phiale had straight sides and a simple arching umbo rising from a flat base. The Achaemenian type had a flaring rim joining a convex body. The basal surface itself was stepped upward and the umbo again stepped before it thrust upward.[1]

In Thrace, the earliest phiale to survive was recovered from the Muschovitza tumulus near Douvanli (Duvanlij) north of Plovdiv.[2] This silver, deep-bowled phiale decorated with a lobed pattern is datable to the late 6th or early 5th century. The phiale was found placed over the mouth of a bronze hydria. Immediately west of Douvanli in the Koukouva Mogila tumulus there was recovered a finely made silver phiale dated to the

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1. See Strong, 1966, p.76 for a drawing of profiles.

2. Filow, B. and I. Welkow, Jahrb. des deutschen arch. Inst., 45, 1930, pp.306-320.

early 5th century (Fig. 22).[1] This phiale is also of the Achaemenian type with the fluted body, shallow umbo and wide flaring rim.

The late 5th century period is well marked with phialai of several different styles which must have been in use concurrently. From Radyuvene (Lovech District)[2] a large treasure yielded several silver phialai, two deep-bowled and smooth-bodied, two small reeded-bodied, and one large fluted phiale (Fig. 23). For the same time period the Alexandrovo tumulus (Lovech District) yielded four silver phialai, one smooth-bodied, two fluted and one reeded-bodied (Fig. 24).[3] One of the fluted-bodied phialai bears a Greek inscription with the Thracian name KOTYS, King of the Engestai.[4] This is not the only example of a phiale bearing this name. The smooth phiale has a gilded eight-pointed rosette on the omphalos. This enrichment of the omphalos evolves towards high relief imagery, and eventually this centre portion becomes an independent three-dimensional structure, the emblemata.

In the Boukyoutsi Treasure dated to the late 5th-early 4th century two silver phialai were found (Figs.

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1. Filow, 1934, pp.6-58.
2. Filow, B., Bulletin de la Société archéologique bulgare, 6, 1919, p.34.
3. Filow, 1934, pp.180-185.
4. The question of inscriptions on Thracian phialai is discussed by Venedikov (1975), pp.78-79.

25, 26).[1] One of these (Fig. 25) is a finely executed example of a roeded-body type which has miniature geometric lotus blossoms placed at the ends of the grooves. A band of ovulae trims the body at the base of the flaring rim. The second phiale from this treasure is a crudely executed product with widely spaced grooves. A ring of semi-circular chased lines has been punched at each end of these grooves. A band of ovulae has been set at the base of the graceless rim. This phiale demonstrates a most modest understanding of the technique of chasing.

In the mid-5th century the technique of engraving enjoyed a brief vogue before attention returned to chasing and the manufacture of high relief imagery. A fine example of an engraved phiale was recovered from the Bashova Mogila tumulus near Douvanli (Plovdiv District) (Fig. 27).[2] This silver and gilt phiale, dated to the late 5th century, has been skilfully engraved with the scene of a chariot race. Four quadrigae, being driven at great speed, each bear a charioteer and a warrior. The warriors are fully armed with helmets of various types, cuirasses, greaves and shields. On three of the shields figures can be seen: a horse, lion and centaur. One warrior prepares to

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1. Ibid., figs. 135-137.
2. Filow, 1934, p.63, pl. IV.

descend. These figures, all of which have been gilt, have been drawn in a technique more familiar in the ceramics of this period. The umbo is surrounded by a pattern of palmettes and lotus blossoms alternating, and a laurel wreath pattern.

A fine example of a deep-bowled vessel of Persian style was recovered from Vurbitsa near Preslav (Fig. 28).[1] The lower part of this silver vessel is a hemispherical bowl which closes in abruptly at the base of a tall slender neck. The bowl section has been richly chased with a tongue pattern which is outlined with a double line. A band of guilloche pattern has been worked on the shoulder of the hemisphere. On the outside of the umbo a double rosette has been worked in high plastic relief. Visually this exceptionally tall neck has been integrated to this richly decorated bowl by means of the addition of an engraved wreath of ivy about the middle of the neck.

Datable to the late 4th or early 3rd century is a silver deep-bowled phiale found at Branichervo (Shoumen District).[2] This vessel has been chased with an all over diamond-shaped pattern (Fig. 29). The vessel is inscribed with a name and further signs probably indicating weight.

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1. Filow, 1934, pp.171-180.

2. Venedikov, 1975, fig. 141.

Further northward on the Dobrudgea of present-day Romania several phialai were recovered from the Agighiol tomb burial dated to the 4th century.[1] The most outstanding of these phialai was a silver example decorated in a lotus pattern (Fig. 30). Open flowers alternating with lobe-shaped bosses fill the entire field about the omphalos. The quality of the product suggests that this was a vessel imported into this northern region. By comparison the locally made products are of inferior quality.

A single example of the elaborate high relief phiale of the late 4th - early 3rd century period is found among the objects of the Panagyurishte Treasure.[2] This rich collection of nine gold vessels, consisting of a phiale, three head vases, four rhyta and an amphora-rhyton, is one of the largest treasures of ancient metal-work so far discovered. It weighs 6.0 kilos of pure gold. The phiale has been inscribed on the inside of the rim with the weight in drachmae and in Lampsacus staters. Thus, the city of Lampsacus on the coast of Asia Minor has been suggested as its likely site of manufacture.

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1. Berciu, D., Contribution a l'étude de l'art Thraco-Gète, Bucharest, 1974, p.57f.

2. Svoboda, B. and D. Concev, Neue Denkmäler antiker Toreutik, Prague, 1956.

The entire surface of the phiale has been worked (read from the exterior) in three concentric circles of negroid heads.[1] These heads increase in scale to fill the wedge-shaped space allotted the repeated motif. However, the image itself has not simply increased in scale, since the proportions of the features differ within the three scales. These subtle differences between the three rows suggest that it was intended to be read as an increase in age, representing the stages of life: boyhood, adolescence, and manhood. Proportionately, the smaller head image is longer than the largest head image, the fleshy tip of the nose is smaller, the expression line on the forehead is placed higher and thus nearer to the hairline. The head of hair is proportionately less in the smaller image than in the larger one and accounts for much of the increased width of the overall head measure. On the largest image the bridge of the nose is more deeply depressed and consequently the occipital ridge more prominent. The eyes appear more deeply set in this image as a result. It is fact that the occipital ridge, prominent to the negro generally, is a feature characteristic of the mature male. The smaller image gives a look of surprise while the largest image is more grave. The middle scale is a graduation between these two extremes.

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1. See Beardsley, G.H., The Negro in Greek and Roman Civilization, Baltimore-London, 1929.

The innermost row of concentric circles is filled with images of acorns, and a minor row of tiny bead-formed rosettes is placed at the tip of alternate acorns. The surface space between the negro heads has been filled with fine line scroll and palmette patterns. These have been proportioned to utilize all of the space so that none has been left unworked.

Similar examples of this general form do exist in both clay and metal phialai. An example dated to the same time period was found in the Kul Oba tumulus in South Russia.[1] There not a negroid, but a Gorgonic motif was used, with the same sense of horror vacui displayed. In similar design layout the gold phiale in the Metropolitan Museum of Art is an outstanding parallel example (Fig. 13). There, rather than the image of negroid heads, an image of acorns has been used to create the concentric pattern. Again a low relief pattern of palmette and little bee images fills in the flat surface.

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1. Minns, E.H., Scythians and Greeks, Cambridge, 1913, p.204, fig. 99.

THE RHYTON

Primitive man used the horns of animals for his drinking vessel. Into historic times it was recorded as the common drinking vessel of the Thracians,[1] as it was among the Scythians.[2] A scene of two Scythians drinking from the same horn is depicted on a small gold (?) clasp found in the Kul Oba tumulus near Kerch (Fig. 31).[3] Here the horn is being used as a simple drinking vessel not as a rhyton. Dorotheus of Sidon has been quoted as saying that 'rhyta are like horns, but have a hole bored in them, and from them as the liquid is discharged in a slender stream, people drink at the lower end, and so they have got their name from the flowing (rhysis)'.[4] This was the view of the rhyton for the Classical period. However, the rhyton as a category of vessel is not so restricted in its form.

The rhyton is an ancient class of vessel of diverse forms which have been produced in different materials, in a wide variety of shapes and over a wide terrain. The most common materials used have been horn, clay and metal and less commonly soft carvable stones as steatite, glass and

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1. Xenophon, Anabasis, tr. Rev. J.S. Watson, London, 1878, VII, 3, 24-26, p.225.

2. Strong, 1966, p.86.

3. Rostovtzeff, M., Iranians and Greeks in South Russia, Oxford, 1922, p.106.

4. Athenaeus, V, xi, 497, p.221.

wood. The variety of forms is so divergent that form alone could hardly serve as the basis for establishing this category. Rather it is by means of this constant feature of the rhyton having two openings that these forms are identified.[1] One of these openings is large and used for filling the receptacle and the second opening is a small spout or simple hole generally placed low on the form from which a thin stream of fluid can pass as required. Without this second opening or spout, one is dealing with a second group of vessels which some scholars have included within the class of rhyton. Among this group are the animal-head vases which are a simple cup and handled as such, that is, the fluid is drunk from the lip of the opening.

This principle of a vessel which could emit a fine stream of fluid when required was also built into a variety of amphora or vases, though far less commonly judging from the relatively few examples extant. Among the items of the Panagyurishte Treasure there is a gold amphora which has two spout holes in the bottom aspect (Figs. 41, 42).[2] The base of this vessel does not flatten but is a continuation of the curvature of the amphora body. Thus it is not intended to rest in an upright position, just as many rhyta are of the dependent

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1. Ghirshman, R., Perse, Paris, 1963, p.326.

2. Svoboda, 1956.

or hand-held variety. Also in this same treasure there are three head vases made similarly to those fashioned in clay at this period. These vases each have a pedestal base, handle, and spout placed at the neck. This spout itself is in the form of a lion head medallion; the fluid passed through its open mouth.

Datable to the same time period is the amphora of the Chertomlyk tumulus on the Kuban in South Russia (Fig. 32).[1] This bronze vessel is considered to be a Greek product made to satisfy the desire of a Scythian chieftain for sumptuous vessels after the Greek fashion. The body of the vessel is covered in floral motifs of palmettes and lotus. Above the shoulder joint, and set on the ridge it produces, are set figures of Scythians in the act of breaking in horses. These figures were cast separately and then soldered into place, thus creating a scene of everyday life of the Scythian. Three protomes, the largest being that of a horse head, and two smaller ones of lion heads, serve as spout holes. Since these holes are equipped with strainers, it is believed that the vessel was made for serving kymis, the local beverage, which has dregs. While these vessels are equipped with spouts and thus conform to the minimum requirement of a rhyton, they do stand at a remove from the classical concept of a rhyton.

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1. Schefold, K., "Der skythische Tierstyl in Sudrussland", Eurasia septentrionalis antigua, 12, 1938, p.24.

Animal Imagery

The second most common characteristic of the rhyton is that it contains an animal form or animal imagery, in whole or in part, worked into the body of the rhyton itself. This animal reference may be in a protome on the vessel (see Fig. 33),[1] the forepart of the animal body attached to the vessel (see Fig. 35), the whole animal body as the vessel (see Figs. 345, 347, Ghirshman), or simply the animal head which is the form the vessel takes (see Fig. 36).[2] This connection with animal imagery is present in the earliest forms of rhyton and continues throughout the long history of the form.

Form and Function

The third characteristic of a great many kinds of rhyta is that of having a flaring cup receptacle attached at various axes to the animal portion. At times this is simply a direct continuation of the animal part, the animal-head cup, a type which was widespread in Persia and Asia Minor in the 8th-7th century.[3] At other times it is set at as much as right angles to the animal portion. The long arching conical-shaped rhyton with

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1. Rostovtzeff, 1922, pl. XII.
2. Schliemann, H., Mycenae, London, 1878, pp.215-218, Nos. 327, 328.
3. Venedikov, 1975, p.74.

animal protome at the small end is the fullest expression of this kind of rhyton and aesthetically one of the most satisfying. This form is a return to the natural horn to which a mouthpiece or protome was attached.

Variations of the basic characteristics have been formulated which relate to the method of handling. Large groups of rhyta types are constructed to set upright as whole animal forms. The type developed by the Achaemenids also has the receptacle set at right angles to the animal part. The conical type and those approaching the animal-head bases are however a dependent variety which must be supported when filled with fluid. Some variations are equipped with handles such as the Panagyurishte rhyta (Figs. 43-45) and the 5th century Greek clay head-vases (Fig. 37).[1]

For some a basal stand has been added to the otherwise dependent shape. Alternatively, stability has been established with the addition of an extra "foot" placed on a dependent form. These additions for stabilizing rhyta of the dependent varieties in order to set them in an upright position are for the most part ill-considered adaptations which suggest that the method of using (or displaying) the rhyton had become modified, but the article itself had not been reconsidered. An extreme

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1. Tuchelt, K., Tiergefässe, Berlin, 1962.

adaptation of the rhyton, modified towards the cornucopia, is found in a Greek example of the 4th century B.C. (Fig. 53).[1] A seated satyr figure (interpreted as Dionysus)[2] holds the cornucopia-shaped cup. The two parts, figure and cup, are more nearly a sculpture than a usable vessel.

Western Asia and the Near East

From the 10th to the 6th century B.C. in the region of the Iranian plateau and westward to the Near East and Asia Minor the rhyton in many variations was a much favoured vessel. R. Ghirshman has grouped the rhyta for this period and area into four categories:[3]

Form A - Full body of animal with spout for filling on the back.

Form B - Head of animal with prolonged vertical receptacle from which the Achaemenian rhyton evolved.

Form C - Cup with animal head on the bottom aspect - the animal-head vase.

Form D - Form of rhyton as the horn of an animal with protome of an animal.

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1. Beazley, J.D., "Charinos", Journal of Hellenic Studies, 49, 1929, pp.38-78, p.38.

2. Ibid.

3. Ghirshman, 1963, pp.322-327.

Ghirshman sees the animal body rhyton as the ancient form and the other three as more recent types developing in the region of the Iranian plateau. The groups A and C are 'true' rhyta since they have a second opening, with B and D forming a family apart. Form B developed from form C. However, these categories can be treated only as generalities since examples of form B and D exist with second openings as well.

The history of the rhyton of the eastern Mediterranean world is found in Svoboda's study on this subject.[1]

From the Mycenaean culture two animal head rhyta, one a lion's head made of gold and the other a bull's head made of silver (Fig. 36), were found in Shaft Grave IV. The bull's head was formulated from a single sheet of silver and the long graceful horns were made of bronze. The bronze ears were gold-plated on the exterior and soldered into place. The nostrils were chased on to a contoured piece of gold which was wrapped around the end of the muzzle. A back plate, now missing, enclosed the receptacle. A gold rosette set on the forehead was the single decorative motif on this powerful form. Since similar rhyta have been found in graves on Crete, as well as their images in Cretan painting, it has been considered possible that these were Cretan products,

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1. Svoboda, 1956.

or at least that their makers were Cretan.

Further indirect information on Bronze Age metalwork in Greece and Crete has been found in a series of Theban tomb paintings dated to the late 16th - mid 15th century.[1] Both conical and animal-head rhyta are depicted. After about 1200 B.C. vessels of precious metal became very rare in this part of the ancient world, and it is only with the 8th century that metalware is reintroduced into Greece, probably by Phoenicians.

While clay rhyta are to be found throughout the 5th century in Greece, the earliest animal-head cups are not found before the late 5th century. Also, it is not before this time that the horn rhyton with foreparts of animals is to be found. As with the phiale mesomphalos, it is from the kurgans of the Scythians and the lands of the Thracian kingdom that fine examples of both Persian and Greek rhyta have been recovered.

South Russia

The oldest rhyton from this region was found in the Kelermes kurgan on the Kuban and dated to the 6th century.[2] This silver rhyton is engraved with a mythological scene and is characteristic of Ionian art of

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1. Evans, Sir A., The Palace of Minos at Knossos, London, 1921-35, i, p.667; ii, 655-668.

2. Rostovtzeff, 1922, p.491.

the period. It is believed to have been imported from Asia Minor.

In kurgan IV of the Seven Brothers tumulus which is dated to the 5th century three rhyta, one of silver and two of gold, were found (Figs. 33, 34).[1] The silver rhyton is of the conical variety, having a wild goat protome with decorative curling wings in the formal Achaemenian style. The two gold rhyta are of a very different construction and probably Greek made. Both these long slender rhyta have been composed of sections and given diminutive animal protomes held in place by rivets. The ram's-headed rhyton has an undecorated shaft with only a row of beading decorating the edges of the sections. The second rhyton has the protome of a dog's foreparts. The sections of the shaft are decorated with fine line patterns of a diamond pattern and a geometric feather-tip pattern, long favoured in this region. Several wooden rhyta were also found in this kurgan, though today only the gold-chased mounts have survived (see Rostovtzeff, pl. XIII).

In the Kul Oba kurgan of the 5th century a head cup was recovered[2] which is similar to the Poroina rhyton from Romania (Figs. 48, 49). A much-fragmented rhyton

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1. Ibid., p.53.

2. Imperial Archaeological Commission, Antiquités du Bosphore Cimmérien, St. Petersburg, 1845, p.87, pl. xxxvi, 1 and 2.

was found in the Karagodeuashkh kurgan in the Kuban.[1] This rhyton has been assigned to the 4th-3rd century but stylistically it has affinities with the 5th century style. The Karagodeuashkh rhyton is of great interest since it has figurative imagery (a religious scene) as does the Poroina rhyton. Rostovtzeff has interpreted the scene as one of the rite of holy communion, a rite which occurs later in the Irano-Pontic cult of Mithra.[2] The significance of this scene and that of the Poroina rhyton is discussed below.

From the region of the Caucasus to the southeast of the Black Sea a chance find of three rhyta was made in the course of construction being carried out in 1968 (Figs. 38,39).[3] The largest of these rhyta is of the conical variety, ending in the representation of a complete horse. The remarkable figure of a horseman, dressed in the Median-Armenian mode, sits astride the horse. He wears a helmet upon which a bird image is engraved, and sits upon a fringed saddle blanket decorated with a pattern of ibexes antithetic and couchant. A short sword is belted at his side. The second rhyton is also of a horse

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1. Imperial Archaeological Commission, Materials for the Archaeology of Russia, xiii, 1894, p.144ff.

2. Rostovtzeff, 1922, p.104.

3. Arakelyan, B.N., "Klad serelryanikh izdeliy iz Erebuni", Sovetskaya Arkheologiya, 1971, No. 1, pp.143-157.

figure. It is chased, and has the conical part worked in vertical ribbing typical of this later period. Stylistically the rhyton is different, however, and is considered to be of Cappadocian provenance. The third rhyton is a bull's head vase. On this rhyton there is represented a court scene: a man is seated on a chair, and three ladies are present, one playing a lyre, one a double flute, and the third gives a cup to the man. This piece has Ionian characteristics and was probably a product originating in Asia Minor.[1] The treasure has affinities with Achaemenian toreutics of the 5th-4th century. Erevan, it is to be recalled, was an administrative centre of this region during this period when it was an Achaemenian satrapy.

Thrace

The earliest evidence of the use of the rhyton form in Thrace is datable to the 6th century and comes from Trebenishte (western Macedonia near Lake Ochrid).[2] The long drinking horn with its patterns of overlapping leaves and fluting is purely Greek in style and manufacture.

One of the finest rhyton recovered in Thrace is the silver conical rhyton datable to the last quarter of the

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1. Ibid.
2. Filow, B., Die archaische Nekropole von Trebenischte, Berlin, 1927, p.31.

5th century and found at Bashova Mogila near Douvanli (Plovdiv District) (Fig. 35).[1] The mouth is decorated with beading and ovulae with lotus blossoms alternating with palmettes engraved below. The graceful sweeping body of the rhyton is finely decorated in perpendicular fluting. The prancing horse protome has the hooves, mane and breast strap decorated with circlets and gilded. There is a small hole at the breast and an inscription on the inside of the rhyton. A very similar example is in the Prague Museum. Here the horn is shorter and stouter, and the galloping horse is portrayed even more dynamically.

A silver head vase was found at Rozovets (or Rachmanli) (Plovdiv District), datable to the first half of the 4th century period (Fig. 40).[2] It is in the shape of a doe's head and the neck is decorated with a wreath of ivy leaves and berries. A scene is depicted of three naked figures, the central one a short-limbed Silenus figure bent forward under the weight of a large krater he is carrying on his shoulder. He is accompanied by two satyrs. The doe's head is treated sensitively with hairs indicated about the muzzle and eyes. The eyes are hooded in stepped folds and the ears, made separately and soldered into place, lie flattened back. The eye sockets were filled, presumably with glass incrustations. A small hole for drinking is on the lower lip. Gilding

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1. Filow, 1934, p.67.
2. Ibid., pp.182-183, Pl. 8.

highlights the rim, wreath and the three relief figures. A similar silver rhyton from Tarent is now in the Trieste Archaeological Museum (see Filow, 1934, Pls. 220-222). This rhyton has a handle and is also decorated with a figural scene. Winter considers that this may be a local product made under Ionian influence.[1]

Among the forms of the Panagyurishte Treasure were four gold rhyta, three animal-head vases with handles, and one conical variety with the protome of a leaping wild goat (Fig. 43). These forms along with the amphora-rhyton and phiale are believed to be the original part of this collection which dates from the time of Lysimachus, 306-280 B.C. The three amazon head vases were later additions datable to the early 3rd century. This treasure, one of the largest hoards ever found, was discovered in 1949 two kilometres south of Panagyurishte on the upper Luda Jana River.[2]

The wild goat protome is treated realistically, though its horns are more artful than natural. The fore-part of the body, which is covered with a fine hair pattern, resolves smoothly into the receptacle portion with a full arching curve. The rim, similar on all four rhyta, is treated with a wide flange bent over and decorated with ovulae. On the cup portion is a

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1. Ibid., p.212.
2. Svoboda, 1956; Venedikov, 1961.

mythological scene: Hera enthroned holding a phiale in her right hand, with Apollo to her right, Artemis to her left and next to her Nike.

On the ram's head rhyton (Fig. 44), the crown of its head and its neck are covered with a dense pattern of circlets to suggest fleece. This contrasts sharply with the smooth surface of the animal's face. The relief scene depicts Dionysus with Eriope and the Bacchantes. Dionysus is seated on a throne holding a thrysus. Beside him sits Eriope. Two maenads dance around them, their heads thrown back with open mouths in the typical pose of the frenzied participants of the Dionysian revel. The tambourine held by one and the thrysus held by the other are Dionysian symbols.

Two similarly formed stag-head rhyta differ mainly in the figural scene and in the form of the handle. One handle has a horizontal pattern and the other is treated as a grooved column (Fig. 45). The imagery on the first stag-head rhyton depicts the Judgment of Paris: 1) Athena holding her helmet, 2) Paris seated holding his shield and spear, 3) Hera enthroned, 4) Aphrodite standing next to her. On the second stag-head rhyton the scene is of heroic contest. A) Theseus and the Bull of Marathon. Theseus, his chlamys flying over his shoulders, holds the horns of a bull he has brought to earth. B) Heracles and the Hind of Cyreneia. Heracles, wearing the skin of the Naemean lion, holds the antlers of a great

stag which he has brought to ground. His club he has laid aside at his feet.

The Panagyurishte amphora-rhyton (Fig. 41) is a form derived from the spouted-handle amphora such as the silver one found at Zoukouva Mogila near Douvanli and dated to the first quarter of the 5th century B.C. (Figs. 46,47).[1] This is the oldest example of Persian toreutics found in Thrace. An image of this type of vessel is depicted on the staircase of the Apadana at Persepolis.[2] On the Panagyurishte amphora there is no base, but a rounded bottom which has two spout holes (Fig. 42). Otherwise in general form it follows the earlier Achaemenian amphora, though the ornamentation is new and carried out in Hellenistic style. The handles are formed as centaurs, each standing on a tambour, with the front hooves placed on the rim and with the arms upraised. The two central personages of the figural scene stand in conversation beside a great double door. Around the body of the amphora five warriors rush brandishing swords; the fifth is blowing a horn. This frieze is enframed in the classical scroll motif of alternate palmette and lotus flowers at the shoulder and palmettes alone at the base.

On the base there is a figure of the infant Heracles strangling two serpents and a reclining Silenus figure

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1. Filow, 1934, p.46f.

2. Ghirshman, 1963, p.176, Pl. 222.

holding a double flute as he reaches forward, cup in hand, towards one of the spout holes. Two negroid heads with open mouths serve as spout holes.

The figural scene has been interpreted as that of the story of the Seven Against Thebes, a story of fratricide.[1] The double imagery, two snakes, double flute, and double spout holes have been suggested as symbolic of the theme of brotherhood. The rite of brotherhood and oath swearing when forming alliances and treaties are customs known to have been practised by the Thracians. Xenophon was party to an oath-swearing ceremony when he visited the residence-cult centre of the Thracian king Seuthes II in the winter of 400-399 B.C.[2] At a banquet the customary ceremony of gift presentation by guests to the king began with a white horse, boy slave, carpet, silver cup, and so forth being presented, and each offering was followed by a toast. Xenophon, having arrived without gifts, spontaneously offered his friendship and his comrades in fighting service. Seuthes rose and "drank together with him the wine and poured out upon himself the drops of wine remaining in the horn."

Evidence of the use of the horn in forming a kind of alliance or pact is found in numerous examples. The previously mentioned gold belt clasp (Fig. 31) from the

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1. Venedikov, 1961.
2. Xenophon, VII, 3, 26-32, pp.224-226.

Kul Oba tumulus is a fine representation of the shared cup, two Scythians drinking from the same horn.

Herodotus described a Scythian ceremony of oath swearing.[1]

> They take blood from the parties to the agreement by making a little hole or cut in the body with an awl or a knife, and pour it mixed with wine into a great earthenware cup, wherein they dip a scimitar and arrows and an axe and a javelin, and when this is done the makers of the sworn agreement themselves, and the most honourable of their followers, drink of the blood after solemn imprecation.

That blood is utilized identifies this ceremony as a blood-brother pact, a ritual carried out between equals, committing each with binding responsibilities for his lifetime.[2] This is a different kind of ceremony than the sort worked on the Poroina and Karagodeuashkh rhyta. On these examples the scenes are dealing with the symbolism of the act of holy communion, a ritual between man and god. Rostovtzeff has mistakenly interpreted imagery of both these ceremonies as the single act of holy communion.[3] Apparently the drinking horn, rhyton, and even an earthenware cup could be used as the appropriate vessel in a variety of ceremonies. If a distinct application did exist for the drinking horn and the

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1. Herodotus, IV, 70, pp.267-269.

2. Evans-Pritchard, E.E., Essays in Social Anthropology, London, 1962; Ch. 7, Zande Blood-brotherhood, pp. 131-161.

3. Rostovtzeff, 1922, p.106f.

rhyton within these contexts, it remains unclear.

Romania

The Poroina rhyton was found near the city of Turnu-Severin on the Danube in western Oltenia, Romania (Figs. 48,49).[1] Datable to the late 4th-early 3rd century B.C., this silver-gilt rhyton is believed to be a local product under the influence of Persian toreutics.[2] The vessel is in the form of a bull's-head cup. However, it is a true rhyton in having a small aperture piercing the lower lip. The vessel was probably cast in toto,[3] and the cup section further worked by hammering. This method of manufacture, apparently not unusual in itself, is tentatively suggested for the Poroina rhyton on the basis of a conversation with a Romanian researcher who had examined the interior of this vessel.[4] He said that he had observed, by means of inserting a mirror and small light into the lower part of the rhyton, unmistakable evidence

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1. Odobescu, A., Trésor de Pétroasa, Paris-Leipzig, 1889-1900, pp.495, 498, Pl. 202, 205; E. Dunăreanu-Vulpe, Tesaurele antice, Studii asupar Tesaurului restituit de URSS, Bucharest, 1958, p.37.

2. Here Berciu (1974) is referring to the form (p.134) and also to the figural imagery (p.135). He makes reference to other influences as well.

3. This method is proposed for the Poroina rhyton based on information given by Dr. Oddy of the Research Laboratory of the British Museum.

4. The researcher (unnamed)was engaged in research on the techniques of metalsmithing exhibited in the collection of the Treasury Room of the National Museum of History, Bucharest.

of the head portion having been cast. The cup portion did not, however, have these characteristics. Furthermore, he could discover no solder line for the attaching of the cup.

It is true that the difference in colour, which the line of solder would show on the exterior, can in time be removed by a process called 'surface enrichment' (see glossary). While evidence of soldering could easily be removed from the exterior, it is highly doubtful that all such evidence could be removed from the interior.

Although it is a common misconception that cast metal is too brittle to be subjected to subsequent hammering, this is not true of silver. Cast silver, when treated properly and carefully annealed, can be converted to a raisable or forgeable condition. Actually this procedure of casting a form with the intention of finishing the form by means of what amounts to raising procedures is believed to have been a fairly common practice.[1] The hammering would compact the surface and remove any evidence of casting, thin the metal somewhat, and in this case prepare the surface for working the required imagery. The Romanian researcher also claimed that there was unmistakable evidence on the interior of a die having been used for the figural images. If this were the case, then three dies would have been used (one figure is

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1. See n.3, p.107.

repeated). All this implies that, in the original cast model, which probably would have been made of wax, sockets to receive the horns (now missing), ears and the incrustations for the eyes would have also been prepared.

The bull's head is a strong form enriched with features handled in a precise, decorative fashion, but with touches of naturalism included. Generally these features, and the ones chosen to be emphasized, such as the cheek vein, jawline, ruff, forelock and stepped eye-folds, were all features expressed earlier in the elegant Achaemenian animal style. Here tiny hair tufts fringe the lower eyelid. The forelock is composed of flame-like tufts which fall to the left and to the right down the muzzle. The straight little lines traced inside these tufts do not contribute to developing the sweep of these tufts, but tend to mechanically fill the space. All possibility of a rich three dimensional illusion has been lost. The whorl or rosette pattern set on the forehead is a decorative motif after the natural hair growth of the bovine. (Not that the forms themselves stand related, but an earlier example was seen in the bull's head <u>rhyton</u> from Shaft Grave IV with the gold rosette pinned high on the forelock (Fig. 36)). However, this same rosette pattern on bulls' heads is found close at hand in the miniature gold cast bulls' heads from Craiova (Fig.120).[1]

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1. Schmidt, H., "Skythischer Pferdegeschirrschmuck aus einem Silberdepot unbekannter Herkunft", <u>Prähistorischer Zeitschrift</u>, 28, 1927, pp.1-90.

These forms are also dated to the 3rd century, their use as yet undetermined. A second similarity worth noting is the proportionally small scale of the horns and ears on the cast bulls' heads. Judging from the size of the sockets on the Poroina rhyton, these too were on a relatively small scale. In both cases the nostrils are treated as crescent lines, albeit the lines join on the muzzle of the rhyton. When these forms are seen from below the basic formal similarity is revealed. The head is a wedge-shape and the end of this (the muzzle) is so rounded that it approaches a sphere. This geometric rather than organic quality is characteristic of Thraco-Getian art.

The rim is treated with a modest flange decorated with a band of gilded ovulae. This feature is similar to the treatment of the Panagyurishte rhyta.

The cup section is decorated with the gilded figures of four priestesses (if indeed they are female). Two stand with their hand held up in the gesture of adoration, and two (reflective images) are seated side by side, each with a vertically fluted rhyton held aloft. The animal protome is difficult to identify.

The costume of all four figures suggests the same heavy, ribbed and textured material which obscures entirely the articulation of the body. The seated priestesses have an additional feature on their attire. Down the front of their dresses there is a short drape

which is gathered and terminates in a ball-shaped object, perhaps intended as a tassel. This dress is of eastern fashion. The Greek women of this period were wearing dresses of thin material, cut full and draped into soft folds. The two styles of coiffures indicated on the priestesses are also out of date for this period in Greece. Hair was worn wavy and piled high on the head pinned into a chignon.

The seated priestesses hold a small round object which has been analysed, albeit tentatively, as a phiale.[1] If it is intended as a phiale, it has been improperly rendered since the convolutions as shown would not yield a proper phiale. While the two seated priestesses are reflective images, the same image has been repeated for the adoring figures which might suggest a procession.

The nearest analogy to the Poroina rhyton which can be cited is the aforementioned bull's head cup from Arinberd, Armenia (Fig. 39).

The general form of the Arinberd rhyton is similar to the Poroina rhyton, but the receptacle portion is shorter and stouter proportionately, and the whole form less curved. The style bears Ionian characteristics and is assigned to Asia Minor.[2] While the forelock on the

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1. Berciu, 1974, p.174.

2. Arakelyan, 1971, p.158.

Poroina rhyton was a fairly well-developed feature, appearing almost as another layer lying on the skull, the forelock of the Arinberd rhyton is less extensive and thinly developed. Little tufts are sketched at the lower eyelid similar to those on the Poroina rhyton. The long corrugated ruff on the jawline, so prominent a feature in the Achaemenian mode, is still present and here worked as continuous lines on the under jaw running from side to side.[1] These as well as other features bear traces of gilding.

The scenes on the cups differ widely in content, however, both are early examples of this frieze type. Der Nersessian cites the Arinberd example as the earliest example of a rhyton with a figural border.[2] Be that as it may, this style does now come into fashion and continues into the next centuries as seen in the ivory horns from Nyssa, the first Parthian capital. On the Arinberd rhyton the scene is courtly: three women in attendance stand near a man who is seated in a low-backed chair. To his left stands a woman playing the double flute. To her left is a seated woman playing a lyre. Next to her is a woman walking towards the man carrying a handless cup on her finger tips. The flower pattern on this attendant's dress, draped and fringed, and her necklace and diadem, as

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1. Ibid., fig. 7, p.151.
2. Der Nersessian, S., Armenian Art, London, 1978, p.15.

well as other similar details throughout, give a note of luxury absent from the more austere Poroina rhyton. The sculptural achievement of the Poroina bull's head and precise development of its features are, however, superior to that of the Arinberd bull's head.

There are numerous other examples of scenes of courtly or religious significance, some having both connotations simultaneously. This would be generally presumed in the Thracian context where the king was also the high priest.

According to Rostovtzeff, there is a scene depicted on the Karagodeuashkh rhyton which is of the rite of holy communion: the god is offering a rhyton to a king.[1] Both members are on horseback. This may be a scene of investiture, a new king receiving his divine rights of leadership. In the queen's grave of the same tumulus there was found a tall triangular gold plaque which had adorned a cone-shaped head-dress (Fig. 115). This space is organized into three sections with a decorative band separating each zone. In the lower zone there is depicted a seated female figure dressed in voluminous, heavy robes and wearing a cone-shaped head-dress draped in veils. She holds a rhyton which is also being grasped by a standing male figure who is placed to her left. He is leading a horse. Several other figures

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1. Rostovtzeff, 1922, p.104.

fill the scene including two figures interpreted as eunuchs, who were known to be a part of the Scythian religious patterns. This has been analysed as a scene of holy communion, or possibly investiture.

The fragments of the silver rhyton from the Merdjany tumulus, near the Karagodeuashkh tumulus and representative of the same period, late 4th - early 3rd century B.C., are few and crudely executed, but of great interest (Fig. 50).[1] Again, there is the image of a robed woman's figure seated on a high-backed throne. Her head is veiled and she holds a small round vessel to her breast. To her right is the trunk and bare branches of a tree. To her left is a pillar upon which the skull of a horse is impaled, suggesting sacrifice. Beyond this stands a bearded man, en face, leading a horse. He holds aloft a rhyton. On these few fragments most all of the symbols used in these religious scenes have been assembled.

Other evidence of this type of theme which includes horse, horseman, and rhyton is present in two gold rings found in Bulgaria (Figs. 51,52).[2] The ring from Brezovo (Plovdiv District) is datable to the late 5th-early 4th century B.C. On the plaque a man holding a

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1. Tolstoy and Kondakov, N., (eds.), Russian Antiquities in Artistic Remains, Issues 1, 2 & 3, St. Petersburg, 1889. See Issue 2, figs. 69, 114 and 123 for rhyta of Merdjany barrow.

2. Venedikov, 1975, figs. 208, 209.

rhyton is standing in front of a horse and horseman which appear to be moving forward (Fig. 51). The ring from Glozhere (Teteven District) is datable to the 4th century B.C. and as yet remains unpublished (Fig. 52). On the plaque a man standing behind a stallion is holding up a rhyton.

Considering all these scenes together, the rhyton is the article most often present. It appears to have been the indispensable ritual vessel, held in use for religious or otherwise solemn occasions among both the Scythians and Thracians over a long period.

In the Roman period the rhyton is closely related to the cornucopia which became an important symbol of abundance. In this form the horn is associated with the goddess Fortuna and at times with a Silenus or satyr figure (Fig. 53). The rhyton (or cornucopia) and phiale mesomphalos are used in conjunction in evidence of very different sorts. On a red figure kylix datable to the mid-5th century B.C. is painted a symposium of gods (Fig. 9).[1] In the central interior disk the scene is of Pluto, who by this period has gained a Dionysian association,[2] reclining on a couch holding a large cornucopia in the crook of his left arm. With his right hand he holds forth a phiale which he is offering to the seated female

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1. Metzger, 1944-45, pp.297-339.
2. Ibid.

figure, Persephone. While the phiale was one of the cups offered to the gods, the rhyton, according to Theophrastus,[1] is rendered only to heroes. The rhyton filled with fruit was equally a hero's offering.[2] In another example, a 4th century Apulian vase, there is painted a banquet scene in which a wreathed reclining male figure holds aloft a rhyton from which a jet (presumably of wine) is falling into a fluted phiale held in the crook of his left arm.

In statuettes there is an abundance of evidence in the Lar figure as a youthful male, frequently standing on tip-toe, the dancing Lar, a household deity.[3] He holds aloft a rhyton in his left hand and offers a phiale forward with his right hand. Usually the phiale is turned forward revealing the omphalos. Judging from the number of examples of this figure which are obviously provincial products, the Lar was a widespread minor deity of the early centuries of our era.

One such figure cast in bronze was found at Sucidava (Celei, Oltenia) in western Romania (Fig. 10).[4] The

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1. Athenaeus, V, xi, 497, p.220, note b.

2. Ibid., see Plato, Critas, 116c.

3. Waites, 1920, pp.241-261.

4. Tudor, D., Oltenia Romană, Bucharest, 1968, p.394. fig. 106/3.

young god is clothed in a short, full tunic, a veil or vestigial chiton wrapped about his arms. He wears the high boots typical of this figure. His head is crowned with an abundant coil of hair which falls to his shoulders. In his right hand he holds a phiale and in his left he carries aloft a goat rhyton. By this late period the religious significance of the phiale and its use as a libation vessel has long ceased. Here it has assumed a symbolic importance.

THE SITULA

Within this category of vessel there are two different, unrelated types which may have had somewhat different manners of use. Both, however, functioned in religious ceremonies. The form of *situla* which first appeared in Central Europe is shaped like a bucket with a swing handle (or two handles close together for stability) and a flat bottom. The *situla* of the Near East is a small cylindrical vessel with a rounded bottom as seen in the 10th century B.C. example from Luristan (Fig. 54).[1] A third small group is formed by a type of *situla* which strongly resembles the animal-head cup, but has a swing handle.[2] Small though this group is, the form was firmly enough established to have been imitated in clay. Even the handle eyelets at the rim of the container are seen in the 7th century B.C. example from Ziwiyé made in the form of a ram's head (Fig. 55).[3] Not only the form but the manner of treatment of the features and textures developed on the animal's head is suggestive of metalworking techniques, namely repoussé and chasing.

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1. Amiet, 1976, No. 79, p.51.

2. Young, R.S., "Bronzes from Gordion's Royal Tomb", *Archaeology*, 11, 1958, pp.227-231.

3. Amiet, P., "Notes d'archéologie Iranienne. Apropos de quelques acquisitions récentes du Musée du Louvre", *La Revue de Louvre*, 1969, 6, pp.325-338, figs. 19,20.

The bucket-type situla was produced in Central Europe at least by the 8th century B.C. A later variety appears in Central Italy and around the head of the Adriatic by the 6th-5th century period. The remarkable style which evolved there in this form, and is referred to as the 'Situla art', was executed in a manner recalling early Near Eastern figural and animal imagery, and totally lacking in Classical feeling. The general format was one of horizontal friezes within which the themes of the Arts of Peace and the Arts of War were depicted. It has been suggested that these situlae were used to serve wine.[1]

The situla of the Near East was used in the Zagros Mountains of western Iran at least by the beginning of the 1st millennium. Its function was to fetch water for religious ceremonies.[2] Though some of the forms of situla were plain, a standardized formula of imagery existed in a small range of subjects. Animals, real and fantastic, were combined with human figures in scenes of feasting, hunting and combat, and were chased in very shallow relief. The format was a single frieze about the body of the vessel, framed above and below by a guilloche, and sometimes by floral patterns. The rounded, almost hemispherical, bottom was given a single rosette with a

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1. Piggott, 1965, p.171.

2. Godard, A., The Art of Iran, London, 1965, p.46.

button at the centre.

Examples of the two basic types of situlae, though independently formulated and of one type, have been found in small quantities in the Thraco-Getian territory. Associated with find material dated to the 5th and more frequently to the 4th century, the egg-shaped bucket type situla has been recovered in Thrace and in Southern Italy.[1] The situla from Zlokoucheve with graceful curving walls and small base is considered to be the Thracian type of bucket situla since most examples of this type have been recovered there (Fig. 56).

By the 5th century B.C. the situla is, generally speaking, a rare form. As in the case of some pieces of armour, the Thracian examples appear to have continued in use, and presumably production, for several centuries later than in the cultures from which the form was originally derived.

The second type of Thraco-Getian situla, more closely related to the Near Eastern type, exemplifies the tendency found in border regions to relinquish only slowly the use of existing forms. In this case, the imagery and descriptive conventions employed were many centuries old (Figs. 57-67).[2] This vessel of the situla class, of which there are only three examples, actually represents a

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1. Venedikov, 1975, p.68.

2. Berciu, D., Arta traco-getica, Bucharest, 1969.

hybridization of two forms: the ancient Near Eastern situla with rounded bottom and the waisted goblet, formed of two inverted, truncated cones set on a rolled base (see Fig. 68).

The body of the Thraco-Getian situla has a basic form of inverted cones, and the bottom is a simple shield-shape which in each example bears animal imagery. The single frieze worked on the body of the situla is one of the typical modes for this category of vessel: a beast-file or procession following the formula long used on ritual vessels in the Near East. In the literature on this type of situla, the vessel has been variously referred to as a cup, beaker, vase, goblet, and situla. The latter is most accurate, regardless of the vessel's hybrid shape, since only this word recalls its cultic importance. Imprecisely as the symbolic language of these forms is understood, religious or ceremonial connotations are clearly announced in both the form and content of the animal imagery.

A fair variety of raised vessels were produced in the late 2nd-early 1st millennium B.C. A long tradition in manufacturing of sheet metal vessels stood behind them. Very close parallels to vessels from Luristan from this period, and from somewhat later ones, have been excavated at Susa in Elam, Uruk in Babylonia, and Nimrud in Assyria. Some

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date to nearly two millennia earlier.[1]

An example of the tall waisted goblet, found in Luristan and now in the British Museum, illustrates the type of vessel to which the Thraco-Getian style situla is related (Fig. 68).[2] Friezes of animal figures, executed in a graceful, decorative style and moving in opposite directions, circle the upper and lower portions of the bronze goblet. This example is a provincial product derived from the sumptuous gold and silver examples produced at Marlik and Amlash only a few centuries earlier, at the end of the 2nd millennium. A somewhat more elaborate example of this ritual vessel, now in the Louvre, is made of bronze and silver and inlaid with a white material (ivory ?) now stained blue-green in places with copper patina (Fig. 69).[3] The form, which is about 30 centimetres in height, is constructed of cone-shaped parts which have been joined at the centre with a strongly developed roll at the base. Silver has been appliquéd at the lip and to the figures of men and animals. Little triangular pieces of white material are overlaid in rows at the lip and at the base. A human figure with horns drives a chariot pulled by a horned beast. The reins and

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1. Moorey, P.R.S., Ancient Bronzes from Luristan, British Museum, 1974, p.36.

2. British Museum Quarterly, 37, 1973, pl. Lc.

3. Amiet, P., "Un vase rituel iranien", Syria, 42, 1965, pp.235-261.

harness are carefully worked details.

As to the surface enrichment of these forms, a few aspects of animal imagery and their derivation must be considered since related ones appear on the Thraco-Getian situlae, and it is on this means that analysis of the forms largely depends.

Animal Styles

The phrase 'animal style' was first used to describe the Scythian animal style, since Scythian products, or those believed to be Scythian, were the first to be collected and studied in the late 18th and early 19th centuries. However, since that period excavation has brought to light many products in the animal style from vast areas ranging over many centuries in time, some predating the Scythian products, others of later date. Many new questions concerning the evolution of various animal styles, and their relative influence and interplay, have consequently arisen, and many of these questions remain unanswered. In seeking to identify the source or sources of the animal style which influenced the development of Thraco-Getian animal imagery, it would be most useful to set aside the early presumption that the Scythian animal style necessarily had the greatest influence on this imagery. Rather would it be instructive to analyse these images feature by feature, and compare them to related examples. Relatively little animal imagery exists in

the art from the lower Danubian or Getian territory, and what there is, is largely restricted to two categories imported into this region. One comprises the situla and appliqués or phalerae; the other, the Thracian helmet.

A basis for comparative analysis of animal imagery can be established by examining certain features which characterize animal styles generally, namely placement, relationship of features, both real and imaginary (as birds' heads on antler tips), activities portrayed, and manner of treatment. The absence of human figures and floral motifs is basic to all animal styles.

(a) Animal Procession. The earliest examples of animal processions are to be found in Mesopotamian art and are datable to the mid- or late 4th millennium B.C. The animal procession became thereafter a stock motif of the great Bronze Age civilisations from the cities of the Indus Valley to Egypt and Mycenaean Greece.[1] The cylinder seals of the Uruk period were the earliest of a vast sequence of seals which provide a continuous record of changing fashion for almost three millennia, until the collapse of the Persian Empire in the 4th century B.C.[2] This processional theme began without precedents

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1. Klingender, F., Animals in Art and Thought to the End of the Middle Ages, London, 1971, p.49.

2. Ibid.

simultaneously with the development of town life.[1] It was utilized predominantly for ritual and religious scenes.

Used as an animal frieze, with the animals all facing in one direction and in single file, it was applied in horizontal rows or in concentric circles to both ceramic and metal vessels.[2] Frequently the direction of the friezes alternates in opposite directions to effect an overall balance on the object itself.

(b) Antithetic Composition. The second basic type of placement formulated in the same early period was the confronting animals or the triad with a feature in the centre, either a human figure such as the nude hero, or the sacred tree.[3] This feature is flanked by two identical animal images. The hero may be feeding the animals (in the role of the temple priest) or controlling, even subduing them.[4] The theme of combat between man and beast, or between beast and beast, begins in this period.[5]

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1. Ibid., p.41.

2. Rostovtzeff, 1922, p.19f, pl. III; p.23, Fig. 2. Rostovtzeff cites a vase from the early Maikop tumulus as an example of the archaic treatment of animals in rows.

3. Rostovtzeff, M., The Animal Style in South Russia and China, Leipzig-London, 1929 (reprinted 1973), p.6.

4. Klingender, 1971, p.44f.

5. Ibid., p.45.

The combat scene usually involves lions (or other feline types) attacking bovines or cervidae. From this form came the rampant beast-of-prey image, a key element in heraldry at various periods.[1]

The language operating in these formal arrangements is symbolic. The parts do not interact or only do so in a very limited sense, and the meaning depends largely on the placement of the components. These are the measured rhythms of ritual art.[2] The final emancipation of art from the ancient ritual complex takes place with the Greek achievement in portraying naturalism.[3] For the Greeks of the Classical period art was both narrative and spiritual. A strong current of symbolic language still remained in ritual art.

(c) Nomadic Traits. During the long intervening centuries from the time of the origin of these formulae until the Classical period, the animal image was treated at times naturalistically, and at other times with greater abstraction. Animal styles display propensity for the hybreeding of features. The parts or features of one or more animals are easily grafted onto another, real or imaginary. A single appropriate feature, sometimes two,

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1. Ibid.
2. Ibid., p.62.
3. Ibid., p.64f.

signify the whole animal as the beak stands for the bird, though it is frequently associated with the eye and pronounced cere.[1] The mane or ruff alone signifies the lion, the cloven hoof a quadruped ruminant and so on. This dismemberment and joining of animal features to other animals' bodies, referred to as zoomorphic juncture, typifies barbarian animal styles. At times it is used to almost chaotic effect as on the 6th century bronze matrix found at Gurchinovo (Shoumen District) in Bulgaria, but probably originally from South Russia (Fig. 70).[2] Every animal carries additional features. From this degree of congestion, the trend leads shortly to a deep sense of horror vacui which was alien to early animal style.[3] The fresh vigour of these early animal images degenerated when it was subjected to ornamentation and secondary additions. Direct palimsesting, the whole smaller animal image placed totally on top of the larger image, is an extension of this kind of imagery and dense compaction of design elements.

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1. Borovka, G., Scythian Art, tr. V.G. Childe, New York, 1928, p.41f.

2. Minns, (Sir) E.H., "The Art of the Northern Nomads", Proceedings of the British Academy, 28, 1942, p.5.

3. Borovka, 1928, p.66f. Borovka remarks as to the destructive effects of both Persian and Greek art on the Scythian animal style. Rostovtzeff, 1929, p.29, has a different opinion on this point.

(d) Elongation and Intertwining. The expressive effects of elongation and intertwining were very early discoveries employed in the repertoires of the animal styles.[1] Exaggeration of feeling, and to a certain extent exaggeration of anatomical capacity, could produce a rich and varied language of signs highly charged with energy. There is an example of the use of intertwining to be seen in the imagery of composite creatures on the electrum cup assigned to Hurrian inspiration and to the 12th-11th century B.C. (Fig. 71).[2] The bird-like legs of the bicephalic feline creature are tightly wound into a single supportive stalk set on bird feet placed in profile.

(e) Displacement. The position of the animal's body can undergo almost any degree of displacement. The body may be simply curled, that is the vertebrae are in a "C"-shaped position or in the twisted-body position, which refers more often to the displacement of the vertebrae than to the limbs. In the most extreme cases of inversion, the twist may be a full 180 degrees, with the

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1. Very early evidence is found in Egypt (Middle Kingdom, 3rd millennium B.C.) at Meir of confronting animals with greatly elongated necks intertwined.
W.S. Smith, A History of Egyptian Sculpture and Painting in the Old Kingdom, Boston (2nd ed.), 1949, fig. 33.

2. Parrot, A., "Acquisitions et inédits du Musée du Louvre", Syria, 35, 1958, pp. 163, 186, pl. XV; see 175f, Pl. XV.

forequarters facing one direction and the hindquarters in the opposite one, thus forming an "S"-shaped position. Among the most violent displays of inversion that exist are the series of animal images tattooed on the male body found in the frozen tomb at Pazyryk in the Altai Mountains of Central Asia.[1] In the exuberant contortions of some of these images the hindquarters flip up and over the head and forequarters; the vertebrae are now curved into a backward "C"-shape. Dated to the 5th century B.C., the style of this tattooing is not found in any of the styles of other media recovered at Pazyryk.

Later these kinds of distortion of animal images - elongation, intertwining and inversion - became core elements from which the animal styles of the Migratory and early Medieval period expanded. Carried to the extreme condition of manipulation, an aspect of animal style became a linear style executed ultimately in the swift and sensuous lines of the interlace style.

As to the manner of treatment in animal styles, the range of invention is enormous. It has been observed that some of the earliest Scythian products derive from carvings in organic material such as wood, bone, antler or ivory. They are devoid of naturalistic modelling. Planes established on the animal figures have little to

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1. Rudenko, S., Frozen Tombs of Siberia, London, 1970, pp.109-110, figs. 51, 54; pp.260-266, figs. 126-134.

do with anatomy, but appear to be the logical result of subtracting material from a larger mass. This type of modelling, a technique called 'Schrägschnitt', is done by means of a knife held in such a way that it is possible to realize contours and establish diminishing planes.[1] This process of shaving layers produces a very different look from the technique called 'Kerbschnitt' which amounts to straightforward notching. Scythian gold work dated to the 6th century, such as the plaque of the feline from the Keleremes tomb or the recumbent stag shield plaque from Kostromskaya and now in the Hermitage, exhibit this quality of formulation.[2] The image is read largely by the silhouette and the posture of the animal, with the organs of the senses - eyes, ears, nose and mouth - greatly emphasized.

Near Eastern Conventions

In the Near East very different means of describing anatomical features and planes of the body were devised. One type of pattern developed at least by the 12th century B.C. and long in circulation became a standardized formula borrowed in adjacent areas. This pattern was formed of rows of little horizontal lines or dash marks

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1. Jettmar, 1967, p.36.

2. Minns, 1942, p.6.

stacked in parallel columns and forming a pattern intended to denote an animal's skin. By its placement it also refers to the bones and musculature of the animal's body, and to a certain extent suggests the direction of movement. This treatment is at times executed with great sensitivity and creates a pleasing illusion of three-dimensionality. This convention is well developed on the electrum goblet from Marlik assigned to the 12th-9th century B.C. (Fig. 72),[1] on which a figure, half man, half beast, is in the act of subduing a standing bull.

The Thraco-Getian Situlae

Two silver situlae were found in the tomb burial at Agighiol (Tulcea District) near Babadag on the Dobrugea at the western coast of the Black Sea (Figs. 57-63). Plundered in antiquity, and again just prior to excavation, the tomb and its findings still remain the most important single treasure of the Classical period yet to be discovered in Romanian territory. Precisely dated to the first quarter of the 4th century by the fragments of Greek red figure ceramics found in the tomb, it stands as a measure of the cultural achievement of the Getian tribes who inhabited the lower Danubian region.

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1. Amiet, P., "Antiquités Iraniennes récemment acquises par le Musée du Louvre", Syria, 45, 1968, pp.251-262, acquisition AO21814, pl. XVII, 1-2.

The culture of the Getian tribes, members of the Thracian family, was influenced by the Thracian culture which radiated northward most strongly during the late 6th to the early 3rd century period, or during the height of Thracian power. Works of art from this period recovered from the lower Danubian region are generally referred to as Thraco-Getian, a term indicating this interrelationship and also pointing to the fact that Getian art remains undefined as a separate entity. This is understandable in view of the amount of work found from this period in the lower Danubian area. The burden of proof that this distinction should be made now rests on slender evidence, namely the Agighiol and Craiova Treasures and a few outstanding isolated finds. However, even among these articles there are differences to be noted and original features not seen in purely Thracian material. These features are not in forms generally, but in motifs.

That the Thracian kingdoms were more affluent and powerful is obvious from the far greater amount of material which was most likely created by foreign or foreign-trained craftsmen. In the interests of comparing the levels of Thracian and Getian indigenous products, this material must momentarily be set aside. The indigenous products do not by and large demonstrate a high proficiency or wide range in metal-working techniques. Their real importance and interest, which is considerable,

lies in the evidence they provide as to religious beliefs and political organisations.

Overall, the art of the northern area remained more conservative than that of the south, retaining its geometric character longer. The articulation of the human figure was never mastered; nor was animal imagery. With the collapse of the Thracian kingdom caused by the invasion of the Celts in the early 3rd century, the Getian material of subsequent centuries became more, not less, geometricized, relying on patterns and plant motifs, and more rarely on animal and human figures. In the light of these factors, it seems wiser to adopt the conservative point of view and for the present refer to the works of art from the Agighiol tomb as Thraco-Getian, though in the future it may be possible to distinguish and characterize Getian style.

(a) Agighiol Situla No. 1. The two silver situlae of the Agighiol tomb are similar in form and in the placing of the imagery. The situla in Figs. 57-59 (to be referred to as Situla No. 1) is 18 centimetres in height and 11 centimetres at the largest diameter. According to Berciu it has been formed from a sheet of silver with the bottom section soldered into place.[1] The mouth of the vessel appears to have been formed by bending the

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1. Berciu, 1974, p.100.

edge, first outwards and then abruptly inwards to a horizontal plane. This has resulted in a sharp angle on the perimeter of the mouth. Technically this is a crude means of establishing width at the edge of a vessel. Another possible and more skilful means would have been to produce an outward roll, even to completing a full circle with the edge touching the wall, a process used on some roughly contemporary pieces of armour recovered in this region. Alternatively, the rim could have been thickened by means of caulking.[1] This method requires that with each course of raising the edge be hammered gently downward, sending the metal back into the wall of the vessel. This counteracts the general tendency for the edge section to become increasingly thinner. By this continual displacing of the metal back on to itself, the lip gradually becomes stout and a rich, solid-edged form can be developed. However, the method used here does not indicate a great deal of understanding of raising principles. The artist knew enough to form a simple container, but not enough to finish a well constructed one.

The imagery has been chased and probably no repoussé preceded this work since the relief is quite shallow, though not uniform all over. There is a gradation of

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1. See Glossary; s.v. caulking.

depth, the least being at the waist and lower section of the vessel. There the images were merely traced. The greatest depth of relief is in the upper section at the garland of bird-head images. The metal is probably thinnest here since it would have been most stretched at the rim in the raising procedure.[1]

Three friezes encircle the vessel. The lowest zone is worked in a neat scale pattern with a running scroll at the edge, which as a unit may symbolize water. A narrow band of this scale pattern is repeated just under the angular rim. Below this a garland of bird-head images lies in a free-moving scallop pattern. This motif, more than any, reveals the unplanned, spontaneous execution of this piece of work. The strong hooking beak crowned with the prominent cere and round eye, the bird eye-beak motif, is the symbol for a predatory bird in the Scythian animal style as well as in that of nomadic art generally.[2] A pattern of punch marks - a circle within a square - has been stamped on to the garland.

On the body of the <u>situla</u> a single frieze has been worked, a naïve choice of placement for a waisted goblet shape. The bulk of the animal bodies are on the most recessed plane and the heads and limbs are distributed on

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1. See Glossary: s.v. raising.

2. Borovka, 1928, p.41.

the flaring cones. A procession of three cervidae is interrupted by a configuration composed of a great horned bird with a fish dangling from its mouth and in the act of clutching a fleeing hare. To the right a smaller version of the bird minus horns flies from the opposite direction towards this configuration. To the left there is a disk set high, probably representing the sun.

Viewing the vessel from left to right there is after the great bird a deer with an exaggerated rack of antlers having tines only on one side. This figure with its simplified rack of antlers may suggest the hind which in the reindeer family also has antlers. The antlers are textured with the same punch of circle-in-square motifs as the bird garland. The body of the animal is covered in the textural pattern formed from little stacked dashes creating an overall striped pattern, a weakly developed execution of the ancient convention seen in Fig.72. The head is dominated by the large rimmed eye. Of all three quadrupeds this one is the least exceptional.

The second animal in the procession is a griffin, a collage of additional attributes: the goatee of the billy goat, the elongated antler rack of the reindeer, here scalloped on two sides, an extra horn on its muzzle and back, and the toothed comb of the griffin. This ensemble is mounted on eight legs, the most telling of all the features (Fig. 58).

The griffin on the situla is essentially a composite of horse and stag or reindeer features. The stag, elk and reindeer are all animals found in the repertoires of the tundra and taiga regions of northern Asia, brought westward in the art of the nomadic tribes. The composite theme of the horse and reindeer is found in the 5th century B.C. material from barrow 1 of the Pazyryk burials. Two of the leather horse masks or head-dresses found there were made as reindeer heads with approximately life-sized antlers.[1]

The eight-legged horse of magical powers, found in both Germanic and Norse mythology, is the companion of Wodan and later Odin. Odin, a god of many powers, was associated with death and the underworld. By means of his swift horse Sleipnir, and only with its aid, he could enter the dark and terrible kingdom of Hel.[2] The eight-legged horse is the typical steed of the shaman on his journeys to heaven and to the underworld, especially among people using the horse.[3] Evidence of this widespread belief found all across Western and Central Asia has been perpetuated until very recent times mainly in the oral

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1. Rudenko, 1970, pp.178-180, pl. 119.

2. Davidson, H.R.E., Gods and Myths of Northern Europe, Harmondsworth, 1964, p.143.

3. Eliade, M., Shamanism, tr. W.R. Trask, London, 1964, p.380; also see V. Elwin, The Muria and Their Ghotul, Bombay, 1947, p.150.

traditions of Shamanic practices. The eight-legged creature depicted on the situla must certainly be credited with magical powers and have some association with the idea of death.

The griffin is followed by a billy goat with extra horns on his muzzle and back. All three quadrupeds have been formulated along a similar pattern which is an essentially natural proportion to the body; there are none of the symptoms of elongation (other than antlers and horns), twisting, inversion, and so forth that typify the decorative and more energized means used in the earlier phase of the Scythian animal style. The heads are emphasized, the eyes very large and hooves small. The balance is on tiptoe but not to the extreme of being the 'hanging feet' convention[1] to be seen on Situla No. 2. The means by which these animals are made exceptional is the exaggeration of such features as antlers and horns, and additional features grafted on to the body.

With the great bird configuration, another subject entirely is here introduced. The horned bird with a fish dangling from its mouth, and clutching at the fleeing hare, is a zoomorphic parallel to the investiture scene.[2] The large bird is offering the fish and the hare to the

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1. Borovka, 1928, p.37.

2. Fol, A. and I. Marazov, Thrace & the Thracians, London, 1977, p.40.

small bird. According to Marazov, the Iranian political formula by which a vanquished king had to appear before his victor bearing earth and water provides an explanation of this symbolism.[1] It was one that the Scythians also were familiar with according to Herodotus.[2]

The bird image is an extraordinary collection of features and references, certainly a pictogram of local invention, though the eagle clutching the fish or other animal did appear on coins of this period. The feather pattern is not unlike that of the large bird on the Gurchinovo matrix where each feather type is contained in a geometrically shaped zone. The enormous claw appendage has a small coil on it near the body which may well be a vestigial reference to the haunch whorl which persisted into Achaemenian art as a decorative scroll counterbalancing that on the shoulder. The theme of a bird with a fish in its mouth is found as early as the late 4th millennium painted on a ceramic dish found at Susa.[3] The fish and the snake in the eagle's mouth is a widespread theme, frequently found on Thracian objects,

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1. Ibid.

2. Herodotus, II, iv, 127, p.329. "'Gifts I will send you, not earth and water, but such as you should rightly receive; and for your boast that you are my master, take my malison for it'. This was the speech returned (to Darius) by the Scythians."

3. Frankfort, H., The Art and Architecture of the Ancient Orient, Harmondsworth, 1954, p.1.

symbolizing kingship or royal power.[1] The horns, as on the Achaemenian eagle griffin, though here not knobbed, fall into a swift compound curve, a feature which visually counterbalances well the large claw appendage.

Presuming that the interpretation of the configuration of the great bird, fish and hare with the small bird and sun are accepted as an investiture scene stated as a zoomorphic parallel, then the bird garland may also be associated with it. A wealth of lore concerning the association of birds, especially flights of birds signalling momentous occasions of an auspicious nature, exists as a theme found across western Asia, and even into the Celtic and Indian worlds.[2] The garland of birds may be intended to symbolize a flight of birds.

On the bottom of the <u>situla</u> an awkward griffin figure, haunch in mouth, floats over a docile-looking boar with a horn on its snout, probably a misunderstood translation of a tusk. The griffin in the act of devouring another animal is in the tradition of eastern origin defined by Jacobsthal as the 'Voracious Beast' convention,[3] and to be seen on another Thraco-Getian

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1. Marazov, 1977, p.40.

2. For Celtic tradition see A. Ross, <u>Pagan Celtic Britain</u>, London-New York, 1967, p.254. Concerning Indian literature see J. Vogel, <u>Indian Serpent-Lore</u>, London, 1926, p.100, pl. VII. This tryptic railing-pillar of Amaravati is in the British Museum.

3. Jacobsthal, P., <u>Early Celtic Art</u>, 2 Vols., Oxford, 1944, p.30.

product, the Coţofenşti helmet (Fig. 86). This image is early found in Assyrian art and later it appears in both the Situla Art of the Etruscans, and in Greek art, from which it moved into Eastern Europe, but not into Scythia proper.[1] The theme was not unknown to the Celts. The griffin wings look as if they are a clumsy version of the strap-on wings of the Achaemenian type. They are not integrated organically to the body as is the Greek style of the winged griffin. The thickened end of the griffin's tail alludes to its magical powers. Bird talons, ears and hooking beak classify this creature as an eagle griffin.

(b) Agighiol Situla No. 2. The Agighiol Situla No. 2 is somewhat smaller, 16.7 centimetres in height, and has only three figures in procession (Figs. 60-63). It entirely lacks the investiture formula. The border at the lowest zone is done in a pattern which represents hilly terrain. This scale pattern was a standard convention in Urartian art.[2] It is seen in an early example on the gold cup from Hasanlu dated to the 9th century B.C.[3] The triangular form beneath the feet of each animal may be an extension of this theme to indicate

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1. Ibid.
2. Van Loon, 1966, p.101.
3. Ghirshman, 1963, pp.28-29, figs. 30, 31.

mountains. Only a bird garland surrounds the lip of the vessel, and this has not been decorated in punch marks, but outlined in a fine line pattern.

The three animals represented are similar to those on Situla No. 1: reindeer (here with eye in front view), goat and griffin, though all are treated in a far more decorative manner, parading in a somewhat more jaunty rhythm. The animals all float weightlessly in space, toes pointed downward, in the 'hanging feet' convention. Their bodies are worked in designs which bear no relationship to anatomy - simply flat, infill patterns which seem out of place in relief imagery on metal. If they were coloured these patterns would attain their full potential, and it may well be that the source of inspiration here was found in painted ceramics, textiles, or embroidery rather than in metal. On the griffin figure there are curious crescent shapes at the breast which are difficult to account for. They appear also on the griffin figures on the bottoms of both situlae as well. This same sort of crescent is found on the stages of the Hurrian-inspired goblet (Fig. 71), and also on the electrum goblet from Marlik (Fig. 72) on the standing bull image. If this is its derivation, suggesting breast musculature, the Getian application typically serves a decorative impulse.

On the bottom of the Situla No. 2, there is again a similar eagle griffin floating over an unconcerned boar with a tusk properly placed. The two situlae were certainly not made by the same hand. Basically the bodily rhythms of the two groups of animals are quite different, as is their balance and stance. Furthermore, the detail of the boar tusk, shown as a horn on Situla No. 1, does not indicate the comprehension of this form.

There is one other silver vessel very similar to Situla No. 1 now in the Metropolitan Museum of Art in New York which has been designated as the Danubian beaker (Figs. 64-67).[1] Reputedly it was found in western Romania sometime during 1913 or 1914. However, this assertion has been contested by some scholars because it was not recovered from a controlled excavation and bears a very strong similarity to the Agighiol situlae, especially No. 1. This, together with some established facts, suggests that this information should be reconsidered.

According to the earliest information this vessel was found in 1913 or 1914 in the water of the Danube in

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1. Rostovtzeff, M., Skythien und der Bosporus, Berlin, 1931, p.534 (no illustration; describes recovery of beaker); Griessmaier, V., "Ein Silver-gefäss mit Tierdarstellungen", Wiener Beiträge zur Kunst-und Kultur Geschichte Asiens, 9 (Vienna 1935) 49-60 (illustrations prior to restoration); Berciu, D., "Un vas traco-scitic", Insemnari Archeologice, I, 1940, pp.42-52.

the vicinity of the Iron Gates in western Romania.[1] Rostovtzeff mentions this beaker in one of his studies.[2] Then it is reputed to have been in the private collection of Baron Eugene Lohnen, having been purchased from an antiquarian dealer in Budapest. The first occasion that it was on public display was at the exhibition of Eurasian art held in 1934 in Vienna.[3] And in 1944 the vessel was sold to the Brummer Gallery in New York,[4] from which it was purchased by the Metropolitan Museum of Art in 1947.

It should be recalled that in the spring of 1931 peasants searching for building material discovered the tomb, broke into it, and extracted goods. The systematic excavation of the Agighiol tomb took place in the autumn of that year. The articles extracted by the peasants were later collected in a much mutilated condition by the authorities, but no proof has ever been established that absolutely all articles were returned. Only the compartment in which the three horses were buried had remained unplundered.[5]

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1. Rostovtzeff, 1931, p.534.
2. Ibid.
3. Katalog der Asstellung Eurasiatischerkunst, Vienna, 1934, pl. I, No. 150.
4. Berciu, 1974, p.98.
5. Ibid., 1974, p.48.

That this vessel came from a western site in Romania seems highly improbable for two reasons. That two sites so widely separated geographically had such a similar art style is a theory unsupported by any other similar material found in the western region, or from any site in the linking region (other than the Coţofeni şti helmet found in the southeastern quadrant of Romania). There is insufficient evidence today to believe that there was a large Getian power base established in the western region of Romania, though further excavation could prove this point one way or the other. Today the only information which connects the Danubian beaker with western Romania as a find site is that which was volunteered with this article by the antiquarian who initially sold it to Baron Lohnen. Berciu's suggestion that this vessel could have come from the Agighiol tomb seems plausible in view of the facts known today.

(c) Danubian Beaker. The Danubian beaker is 18.2 centimetres in height and about 15 centimetres at the mouth, with a variable thickness of about 1 millimetre (Figs. 64-67). There are a number of minor differences between the Agighiol Situla No. 1 and the Danubian beaker, such as the sequence of animals and the placement of the sun disc. The stag has not got a rack of antlers but is connected directly to the bird garland, and the goat is patterned rather like the griffin of Situla No. 2.

The same circle-in-square punch pattern is worked on the bird garland, horns and antlers, though less densely than on Situla No. 1, and it is used also on the bird's body rather than the feather pattern. The scale pattern, too, is worked with less density and precision. Many of the little textural detail lines over- and under-shoot their connection, and there is no evidence of burnishing the traced lines. They lay cut as a single fresh stroke.

There are some interesting very minor features that are identical in both situlae. One is the toothed comb of the griffin which is in both cases composed of four wedge-shapes with the interior lines parallel to the edge. The treatment of the eye rims on the quadrupeds in all cases is in a chevron pattern, and at their ankles there are two circle-in-square punch marks followed by a round one to mark the fetlock. A final dot is punched in the corners of all the birds' mouths.

The bottoms have similar images, but the Danubian beaker has an illegible Greek inscription scratched on to it. These bottoms appear to have been soldered into place. This is not surprising from the contour of the form, but why the vessel was not made with it in place (if it were raised) is a good question. Having observed no evidence of seams on the interior of the Danubian beaker, the question comes to mind whether it was cast and then subsequently raised, a subject discussed later on in this text (see p.162 of The Helmet).

The quality of the chasing of the Danubian beaker is not as fine and steady as that of the Situla No. 1, and the strokes are not as rhythmically struck. It seems doubtful if it could ever have been executed by the same craftsman. The fact that details of the figures are so similar is far more impressive than the shift in sequence. These must have been well established individual images. That some details of features are identical must surely place their sites of manufacture at least in very close proximity to each other.

CHAPTER IV

ARMOUR

The amount of armour which has survived from ancient times through to the Classical period is very small in comparison with the amount of weaponry recovered for the same period of time. This is not simply because armour was, by and large, the possession of the leadership group and thus never plentiful, but also because of the nature of its construction and the ideologies which governed its disposal.

Plate armour was always expensive to produce, requiring at least moderately skilful workmanship which involved a great deal of time consuming hand labour. Some armour demonstrates the application of the highest technical knowledge and skill available at the time of its manufacture. On the other hand, some kinds of weapons such as spear, axe, and arrow heads could be mass produced by means of casting, using supervised foundry crews which did not need to have had any real specialized skill. The parallel to this kind of situation in armour production would be the manufacture of <u>lorica squamata</u> and <u>lorica hamata</u>, scale and mail armour.

Of these, scale armour, which originated in the Middle East, is one of the oldest metal defences known, with evidence of its use found as far back as the 17th century

B.C.[1] Thin lamellae of sheet metal, invested with a gentle curve, were cut straight on three sides and rounded on the fourth. Holes were punched near the straight edge opposite the curved one, and through these holes cords were threaded to fasten the lamellae on to a linen or leather tunic. Each lamella was positioned to overlap the next like the scales of a fish.

Mail armour was a far later invention, attributed to the Gauls from whom the Romans acquired their knowledge of its use and manufacture.[2] Mail is built on the simple principle of linking rings, each ring passing through four others to form a flexible net. The most economical means of producing such a defence was to place rows of solid, stamped rings alternately with those of split wire rings. After engaging the links required, the two ends of each split ring were flattened, overlapped, punched and secured with a tiny rivet. While patience and dexterity were required in producing either of these kinds of armour, neither required a high degree of technical knowledge, nor were they expensive to produce or repair.

Plate armour, however, has at times exercised the imagination and expertise of superbly skilful craftsmen who spared no effort to make the articles not only

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1. Robinson, H.R., The Armour of Imperial Rome, London, 1975, p.153.

2. Ibid., p.164.

serviceable, but aesthetically pleasing, even lavish, in their decoration. The few pieces of gold and silver armour that have survived were presumably made solely for parade or ceremonial occasions, when they functioned to distinguish not only the rank of the individual, but the power of the people for whom he was overlord. In the execution of this category of armour the demanding requirements to be met for a piece of serviceable equipment could be, and were, set aside for considerations based more exclusively on design and ornamentation. Analysis of the content of the imagery of ceremonial armour from the Thracian and Getian cultures, some of which will be examined in detail, reveals imagery apparently oriented to the expression of myths concerning leadership and royal power.

Even bronze or steel plate armour intended for heavy duty use and devoid of decoration was never plentiful, nor was it standard equipment for armies even in the Greek Classical period. The young Athenian hoplite was given his shield, the hoplon, and spear upon completion of his training, and these provided at state expense.[1] But he had to bear the cost of his own armour. The cuirass, greaves and helmet, all of which had to be made to individual fit, he would have to commission from

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1. Snodgrass, A.M., Arms and Armour of the Greeks, London, 1967, p.59.

one of the numerous private workshops which generally specialized in one or two of these various kinds of armour. The Roman soldier, faring somewhat better, was given a complete set of equipment when he joined the army, and deductions were then made from his pay until the cost had been covered.[1] For the rest of his life as a soldier this equipment would be repaired and kept serviceable in his legion's workshop.[2] Stationed abroad, he would be able to get replacements from one of a large number of armour and weapons production centres which the Roman army maintained throughout their empire, and every outpost had its fabrica or metal workshop.[3] Armour has been found in many different kinds of locations and burial conditions which reflect sharply different ideologies associated with armour that were practised for long periods among different peoples. According to Hencken's study, which was limited to the helmet of the Bronze Age and early Iron Age, well defined zones can be delineated based on the type of find.[4] This type of find in turn tends to characterize the ideology adhered

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1. Robinson, 1975, p.9. Also Tacitus, I, 17, p.34. On this subject relative to the changing conditions of service, see Watson, G.R., The Roman Soldier, London, 1969, pp.89-91; pp.102-104.

2. Regarding military fabricae see Robinson, 1975, p.8. Also see MacMullen, R., "Inscriptions on Armor and The Supply of Arms in the Roman Empire", American Journal of Archaeology, 64, 1960, pp.23-40; p.27.

3. MacMullen, 1960.

4. Hencken, H. (ed.), The Earliest European Helmets, Cambridge, Mass., 1971.

to within the location. The types of finds he has identified are as follows: 1) votive deposit (bog, river or riverbank), 2) grave, 3) hoard other than votive, 4) other kind. A north-south line can be drawn from the Baltic to the Adriatic and westward across northern Italy to demarcate the western and eastern zones. To the south of this lies the third zone, the Mediterranean world.

Hencken interprets his findings as indicating that in the western zone there was the clearest evidence of votive deposit, including all bog finds and the great majority of river finds. The helmet was a votive offering given by a king or great warrior to the gods by casting it into a body of water. In the western zone no helmets were found in graves; it simply was not considered a burial gift.

In the eastern zone the helmets or fragments of helmets were most often found in ordinary hoards. There no relationship to votive deposit or grave burial could be substantiated.

In the Mediterranean world, the Greek lands and Italy including Istria, the helmet was placed in the grave with the warrior, clear evidence of the belief that it should accompany him in the after-life.

While a similar study for the Classical or Roman period, demarcating any shift in distribution of the

prevailing ideology, cannot be cited, the same methods of disposal or placement of helmets continued. The Greeks, however, did not continue to place armour in graves as a regular custom after 700 B.C. After that time most armour recovered has come from sanctuary sites where war spoils were deposited,[1] and where in later times a warrior might dedicate his own personal armour as a thank offering.[2] The earliest Thracian cuirasses appear in burials in the mid-5th century B.C. They are of a type no longer in use in Greece by the end of the 6th century.[3] The helmet too is found in burial sites from the 5th century onward.

The helmet was also a burial item among the Celts who moved westward into Central and Eastern Europe in the last centuries of the 1st millennium B.C.

The decoration and imagery worked on the surface of armour falls into fairly narrow limits from earliest times. Animal and human figural imagery on armour tends to be found most commonly on armour of the Mediterranean world. As could be anticipated, the animal figures are

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1. Walters, H.B., Catalogue of the Bronzes, Greek, Roman, and Etruscan, British Museum, London, 1899, p.27, No. 251. A Corinthian type helmet is inscribed around the edge as follows: Dedicated to Zeus by the Argives as spoils won in the battle from the Corinthians. Date c. 460. Occasion not known.

2. Snodgrass, 1967, p.48.

3. Venedikov, 1975, p.93.

generally presented in the heraldic mode, affronted on each side of the helmet, and on the cuirass. The lion, horse, serpent and sphinx or some fantastic creature, part animal, part human, are most frequently used, with the Gorgonic or Medusa head used in the later Greek and Roman periods. The natural human figure was less commonly portrayed until the late Roman period when it was applied unsparingly in the highly congested decorative patterns on cavalry sport armour. There it was realized by means of high relief and this, it is presumed, was at times supplemented by the attachment of separately worked figures.[1]

Geometric patterns, applied to emphasize the contours of the form, included a range of bosses, boss-encircled, rows of dots, sawtooth, tongue patterns and edge cording. In the early European helmets, datable from the 8th century forward, patterns were developed largely by the use of the boss, used in different sizes and with rows of dots. Except for the infrequent appearance of strange little faces half hidden in volutes of foliage found in the early phase of the La Tène period, Celtic design remained essentially linear.

The application of facial features such as hair, beard, ears, eyes and eyebrows was obviously appropriate

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1. Robinson, 1975, p.152.

for the helmet just as indication of musculature was on the cuirass and greave. The facial features which characterised helmets from the Mediterranean world were not entirely absent from the European helmet though they tended to be presented as geometric patterns into which faces could be read.

One feature, the eyebrow, should be mentioned since it appears as a highly developed decorative feature on all three Getian helmets. The eyebrow, used in isolation in the space above the facial opening, had an unusually long period of usage on the Mediterranean and European helmet. Descending from the Greco-Etruscan types, as a slender, naturalistic curving form, it was found still being applied some centuries later on the Roman legionary helmet of Imperial-Gallic type.[1] This feature, along with many others of a more practical sort, and indeed the iron helmet itself, is believed to have been introduced to the Romans by the Gauls during the time of Caesar's occupation. The eyebrow feature appears with such regularity during the 1st century A.D. on the Imperial-Gallic type that it has been possible to trace the evolution of this form.[2] Early on it is an almost straight line which dipped towards the nose and lifted at the outer tip. Gradually the inner end became

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1. Ibid., p.45.
2. Ibid.

decidedly hooked, and the outer tip pointed almost vertically. The body thickened and became ridged and the whole form became an emphatic, swollen, compound curve. Traces of its application have been found as late as the 4th century on four examples found at Intercisa, probably employed as a long-remembered feature of the traditional Roman legionary helmet.

Not a great deal of armour has been found in the Thraco-Getian world, but the few examples that have survived are in themselves highly illuminating. This is largely because many are examples of ceremonial type, bearing interesting imagery, and believed to be of local manufacture.

THE HELMET

The helmet was probably the first kind of armour conceived of, and certainly, on the basis of the available evidence, it was the last to remain in use into the twilight periods of many cultures.[1] Many forms of head protection made of perishable materials must have preceded the metal helmet and have vanished without leaving a trace. This is not to say that they were discontinued when metal ones were invented; in fact, the evidence suggests the contrary. Even the earliest metal helmets, which are essentially skull caps with ear pieces and sometimes neck guards projecting, reveal a well thought out design. This sort of helmet was found first in Mesopotamia, and is datable to the first half of the 3rd millennium. Certainly these earliest known metal helmets were superior in functional design to many flamboyant and extreme models appearing in the following centuries. Overall there was an astonishing variation in design, sometimes with several types apparently in use concurrently. Uniformity in armourment is a very recent phenomenon.

Apart from the type of helmet which offers protection to the skull alone, various means of protecting the entire head - including face, neck and even the shoulders to some extent - have been attempted through the ages, resulting

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1. Snodgrass, 1967, p.42.

at times in some highly impractical helmets. A second category of helmets intended for parade or ceremonial use developed alongside the serviceable helmet, and appeared almost as early. These helmets, sometimes made in gold or silver, functioned essentially as does the crown of state, though here as a symbol of leadership and military power combined. Helmets in this category seldom would have been battleworthy by virtue of their impractical design, or the fact that they were made not of a tough bronze alloy or iron, but of the softer precious metals.

The helmet can be analysed comparatively on the basis of fundamental features which any serviceable helmet should have: a crown, cheek-pieces, neck guard, ear guards, lining or soft undercap, and some means of stabilizing the helmet with ties or straps at the chin. Early examples had projections to cover the ears and surrounding area. In time the ear guard becomes more extensive, is projected forward towards the face, and is sometimes slotted for an ear opening. This was a great improvement over the solid combined neck guard and cheek-pieces as seen on the Corinthian helmet which must have greatly reduced the wearer's capacity to hear (Fig. 73).[1] This projection is then referred to as the cheek-pieces.

A rim or flange may follow the arch of the ear opening to

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1. Kukahn, K., Der Griechische Helm, Marburg, 1936, p.87, entry 129.

guard the ear. Later the cheek-pieces become separate, usually hinged or held in place with rings. On some Thracian helmets cheek-pieces were immobile, being riveted into place.[1]

These decisions aimed at improving the functional capacity of the form were made, and solutions formulated, over and over again in cultures widely separated both in place and time, which is never surprising for the evolution of a functional form. The additional features of the nasal guard (seen on the Corinthian helmet) and brow-band were, however, rather later features found on some helmets from the Mediterranean world. The practical Roman armourers added a carrying handle on some of their models which allowed the soldier to suspend his helmet on his person when not in use. In the late Roman period the most complete form of head and face covering was devised in the cavalry sport armour used in the arena games, the hippika gymnasia. This head gear was usually made in two parts with a full facial mask hinging on to a helmet, the two together encasing the entire head, and obviously disguising the wearer, which was one of its purposes. These helmets then were essentially part of a military costume worn for public spectacles.

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1. Snodgrass, 1967, fig. 53.

In 1867 an example, made in the image of a woman's head and cast in bronze, was recovered from the bed of the Olt River near the village of Reşca (Olt District) in Transylvania in northwest Romania (Fig. 74).[1] Two others have been found in Dacian territory, a mask with a man's face from Carsium and a visor-mask from Ostrov.[2]

On to the basic helmet shell additional parts have been added frequently, some serving to strengthen further the helmet, or functioning to deflect blows, while others were strictly for visual appeal. A knob attached to the apex of the crown (or produced from the ingot or sheet used to make the helmet) and reinforcing it was a very early addition which was to be repeated time and again throughout the centuries.[3] The knob appears as a common feature even as late as the La Tène period on the Celtic helmet and on the Roman jockey-cap helmet.[4] Crests, too, have been a prominent recurring feature, set across the width of the skull or running down the centre, as a metal flange growing directly out of the body of the helmet, or set on to a stem, the crest itself made sometimes of

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1. Geschwantler, K. and W. Oberleitner, Götter, Heroen Menschen, Antikes Leben in Spiegel der Kunst, Kunsthistorisches Museum, Vienna, 1974, No. 57.

2. Florescu, R. and I. Miclea, Tezaure Transilvane la Kunsthistorisches Museum din Viena, Bucharest, 1979, p.32.

3. Hencken, 1971, p.32f.

4. Robinson, 1975, p.13.

feathers or horsehair. Along with crests, horns either actual or made of metal, plumes, feathers and horsetails, clipped or natural, were attached, and must have added a great show of colour, and, in some cases, visual movement. These additions functioned also to identify leaders, information which would have been vital in the midst of battle.

The surfaces of helmets have been enriched by the addition of precious materials, gold and silver as overlay, inlay or gilding. Organic materials such as ivory and coral were also attached or inlaid. The decorative techniques most commonly employed have been repoussé, chasing and engraving. Helmets have been produced by means of fabrication of two or more parts (which were either riveted or soldered together), or by casting, raising, and spinning.[1] Some helmets have been assembled by a combination of several of these techniques with additional metal parts such as holders for plumes, feathers, and horsetails riveted into place. On some models these holders were detachable, simply fitting into slots or metal strap holders which were riveted into place.

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1. See Glossary, s.v. spinning.

Method of Manufacture

Concerning the method of manufacture of helmets, there are many questions which have been raised and remain unanswered. The desideratum of superior strength and durability is not always gained simply by a thicker shell. A cast helmet, which some scholars presume heavier helmet to be, could surely have a thicker wall than would probably be produced on a raised helmet. However, cast metal, because of the nature of its micro-structure, is brittle and vulnerable to shattering from a sharp, heavy blow. On this point Robinson has said that 'if there are traces of 'flashes' (sure evidence of casting) to be seen on either the outside or inside surfaces, then the helmet is a forgery'.[1]

Considerable evidence exists suggesting that some helmets have been cast and later hammered,[2] a process observed in connection with the production of the rhyton and other container forms (p.107). This method of casting followed by hammering, as a conjectured sequence of techniques, would be possible since the crystalline structure of the cast metal would have been changed by repeated annealing and the hammering process itself, so that constitutionally the metal would be similar to raised

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1. Robinson, 1975, p.13.
2. Hencken, 1971, p.15. The author quotes the opinions of three specialists who all concluded that specific helmets being examined showed evidence of having been cast and later hammered.

metal.[1] One expert has set aside the use of casting as impractical and quite unnecessary 'because it is so easy to make it (a helmet) by direct hammering'.[2] Such is not the case. To raise a flat disk of bronze or iron into a helmet of required size, while displacing the metal into curving planes and reserving the metal necessary for establishing a thickened rim, is no simple task.[3]

Before turning to the Getian helmets of the 4th century, an example of an ancient ceremonial helmet will be considered in order to provide a basis for comparative values. The earliest helmet made of precious metal is the gold helmet (or wig-helmet as it has been called) which came from the tomb of Mes-Kalam-dug at Ur and is now in the Iraq Museum at Baghdad (Fig. 76).[4] The helmet, which was found in a grave burial, has been

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1. Hoffman, H., Early Cretan Armorers, Mainz, 1972. See p.54, Appendix III by C.S. Smith of M.I.T. concerning the analysis of the microstructure of hammered bronze compared to that of cast bronze.

2. Hencken, 1971, p.15. Hencken quoted Dr. Plenderleith.

3. Snodgrass, 1967, p.58. "...in the seventeenth century A.D., for instance, armourers seem to have lost this art (of making helmets), and resorted to constructing helmets in two or more pieces with a join over the crown; while even in 1939 a modern Greek artificer, making a replica of a similar form, found it difficult to beat out the back of the helmet unless a deep recess was left for the forehead."

4. Woolley, C.L., Ur Excavations II; the Royal Cemetry, London-Philadelphia, 1934, p.155, fig. I 150.

dated to 2300 B.C. Six examples of the service helmet then in use have come from the same site and were found near six skeletons. The shape of these helmets was difficult to reconstruct due to their crushed condition, but basically they were simple skull caps made of copper with a small central peak at the crown and pronounced ear guards.[1]

The helmet of Mes-Kalam-dug has been raised from a single sheet of electrum (15 carat gold) with the features in relief and details engraved.[2] Into the interior was fitted a quilted cap, fragments of the cloth and stuffing found in place. This discoloration of the metal showed that the cloth was brought up on the outside of the helmet, covering the thin edge and secured by laces passed through the small holes round the rim.

A braid of hair has been depicted supported underneath by a slender band encircling the head and including the chignon at the back. A very fine wavy hair texture has been worked on the crown section, and an equally fine-lined scallop pattern, placed like scales, follows below the head band. In the lowest zone, tendril curls are set in neat rows interrupted by the images of the ears which have small openings. There is a single hole

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1. Ibid., pl. 218.
2. Ibid., p.552.

perforating each cheek-piece (for a chin tie?) and a row of evenly spaced holes about the rim which were presumably for attaching a lining. The natural features have been geometricized, treated as equal units, and worked in very shallow relief. The visual impact of this surface treatment relies heavily on the fine-line values which have been so sensitively developed. Although I have not examined the helmet, it appears to be of rather fragile construction in that the edge has apparently not been thickened by caulking,[1] or reinforced by any means. Since the rigidity of any bowl (which the helmet virtually is) is controlled, regardless of the thickness of the walls, by the thickness of its rim, it does not appear that the helmet would have a great deal of resistance to flexing. Functional capacity as armour set aside, the careful execution and the formal elegance of the form itself make it not only the earliest, but one of the most beautiful of all ceremonial helmets which has come down to us. Indeed, it is this total lack of functional value as armour that signifies and enhances its true purpose which is more nearly that of a military crown.

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1. See Glossary, s.v. caulking.

Thraco-Getian Helmets

The form of the Thracian helmet was developed in the 5th century from a type of leather cap worn in Thrace. This was characterised by a high peak which fell forward into a soft fold; the Thracian or Phrygian cap. The Thracian helmet retained this high dome and had long flaring cheek-pieces with sharp projections intended to protect the cheekbones. These created a jagged or saw-toothed profile to the edge of the cheek guard. This was in itself not a new feature, but borrowed. The Thracian helmet followed the Chalcidian helmet in having a space, edged with a slight flange, left for the ear.[1] At times the forward pointing peak of the Thracian cap was actually imitated to no purpose in metal (Fig. 77). The Thracian helmet had a small visor, again a repetition of a feature of the leather cap, but one which served the valuable function of protecting the brow. The well-established Corinthian feature of the nasal guard, which was repeated in many local types of helmets, the 6th century Chalcidian included, was not repeated on the Thracian helmet (see Fig. 77). With the visor it would have been somewhat of a redundant feature, though not entirely. The other style of open face helmet found in this region was the so-called Illyrian helmet which was actually styled after a 7th century Greek helmet which

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1. Snodgrass, 1967, fig. 24.

was made in two overlapping halves joined by rivets at a centre seam.[1] By the 5th century this style had been adopted by other regions, certainly to the north of Greece, and was made from a single piece of metal.[2] One example now in the Cluj Museum was found at Ocna Mureşului (Transylvania) and is loosely dated to the 6th-5th century B.C. (Fig. 78).[3]

Over 40 helmets have been found in Thracian lands. Among them are three outstanding helmets which have been assigned to the early 4th century, one of gold and two of silver. All were found in southern Romania. They are considered to be the Getian type helmet.

The two silver helmets are similar in form, differing significantly only in their imagery. One recovered from the Agighiol tomb burial and now at the National Museum of History in Bucharest (not displayed) is securely dated by the Greek red-figure ceramics also found in the burial to the early decades of the 4th century B.C. (Figs. 79-81).[4] The second silver helmet, which is now in the Detroit Institute of Arts, has been assigned the same approximate date as the Agighiol helmet on the basis of its

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1. Ibid., p.52, fig. 23.

2. Ibid., p.116.

3. Berciu, D., "Le casque gréco-illyrien de Postavat (Olténie)", Dacia, N.S., Vol. 2, 1958, pp.437-450, p.441, fig. 3.

4. Berciu, 1974, pp.46-52.

striking similarity (Figs. 82-85).[1]

The gold helmet, which is in the Treasury Room of the National Museum of History in Bucharest, likewise has been dated to the early 4th century because its form resembles that of the two silver helmets (Figs. 86-88).[2] In 1928 this helmet was found by accident at a construction site in the village of Coţofenşti near the town of Poiana (Prahova District) in southeastern Romania. It was buried in complete isolation. Thus the date for the Coţofenşti helmet rests on the secure date of the Agighiol burial.

Of these three helmets each has a rectangular facial opening (with a small tongue projecting at the centre where a nasal guard would be positioned), ear openings and squared-off cheek-pieces which are a part of the helmet itself. The two silver helmets have the high, slightly pointed dome of the Thracian helmet. Unfortunately the crown portion of the Coţofenşti helmet is missing, but the walls assume the same slow, inward curve which is presumed to terminate in a similar shape; there is no indication to presume otherwise. All three helmets have animal imagery on the bottom sections, and

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1. Goldman, B., "A Scythian Helmet from the Danube", Bulletin of the Detroit Institute of Arts, 42, No. 4, 1963. This article is acknowledged to be out of date.

2. Berciu, 1974, pp.85-92.

on the Coţofenşti and Agighiol helmets human figures also appear. Finally, all three helmets have the image of great staring eyes with curving and angular projections, the eyebrows, filling the space directly above the facial opening.

The impulse to affect facial features, or even a full face, on helmets is a widely distributed phenomenon found among European helmets which are completely unrelated in space and time. Facial features are also found very early on some Chinese helmets of the Shang dynasty from An-yang (c. 1200 B.C.).[1] The reason for this wide distribution is not to be sought in diffusion.

(a) The Agighiol Helmet. The Agighiol helmet, 27 centimetres in height and weighing 743.53 grams, was raised from a single sheet of silver with a thickness overall of about .01 centimetres, and attaining a thickness of .03 to .04 centimetres in the lower section and about the facial opening. The entire perimeter has been upset forming a generous ridge which would greatly increase the rigidity of the helmet. A sawtooth profile runs down the forward edges of the cheek-pieces and a small tongue protrudes at the centre of the opening, a residue of the nasal guard. Here it is a continuation of the median divisor bisecting the rectangular space

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1. Hencken, 1971, p.173.

above. The eyes are framed in thick "S" curving lines, the eyebrows, which hook upward abruptly. This line is echoed in a shorter, smaller "S" curve of a somewhat softer tension. The surface of the helmet is organized geometrically following the form in typical Getian fashion by use of the frieze, simple repeat patterns, and framing of cross-hatched lines.

Over the eye space, and repeated around the body of the helmet, are two rows superimposed, one of tongue pattern, and above it the feather pattern. A frieze of a leafy vine, perhaps ivy,[1] is also worked about the crown of the helmet above the other frieze. These three rows of decoration are interrupted over the ear opening by the image of an ear (after the Greek curling "C"), set above, just as the eye image is set above the facial opening. In front of the ear on each side is set a small section of the coil pattern, reminiscent of the hair patterns on the Agighiol greaves and helmet fragments from Cucuteni-Băiceni (Fig. 90).[2]

The two holes which perforate the cheek-pieces have been suggested as attachment points for a lining. However, their use for a chin cord is more probable.[3]

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1. Berciu, 1974, p.51. Berciu sees these spade-shaped forms as heads of serpents.

2. See Treasures from Romania, British Museum Catalogue, No. 140. Sandars interprets this coil pattern motif as a modification of the beak-head motif (Sandars, 1971, p.107).

3. Robinson, 1975, p.14. Robinson mentions the third point of attachment for the chin-strap, rings held in place by a rivet. This, with the usual two points, one at each side, would have made it difficult to dislodge.

The suggestion would be more fitting when there are many holes, or a continuous row of holes. Linings were also glued in place. At times there were possibly none and a separate cap was worn underneath.[1]

Four images of mounted horsemen (two on each side in mirror reflection) parade about the lower sections, the cheek-pieces and neck guard. They are dressed in what appears to be scale armour and carry their spears or javelins high in readiness. The same scalloped hair pattern is seen as on the warriors on the Agighiol greave No. 1. The small horses, bridled and wearing phalerae, exhibit the 'hanging feet' convention. A pattern of dots outlines parts of the bodies of the horses thereby tending towards the segmentation of these body parts.

A single eight-petalled star or rosette is placed at the centre of the neck guard (see Fig. 81). This same motif of the eight-pointed star or rosette (four long pointed petals alternating with four short rounded petals) is worked in a frieze on the neck guard of the Detroit helmet (Fig. 85). This kind of eight-pointed

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1. Ibid., p.144. Little evidence of lining has actually been found. An iron helmet found at Newstead had some portions of thick woollen padded lining attached to the interior of both skull-piece and mask (of a cavalry sport type helmet). The resinous substance attaching this material to the helmet became sticky when hot water was applied. Robinson also cites a recorded instance of a separate cap being worn under the helmet of a Roman soldier.

star or rosette pattern is derived from Mesopotamia where it was long in use.[1] An example of this star or rosette pattern (again four long pointed petals alternating with four shorter rounded petals) is found worked in sheet gold decorated by means of repoussé in Shaft Grave III at Mycenae.[2]

The Detroit helmet was also raised from a single sheet of silver, again with the entire perimeter thickened by caulking (Figs. 82-85). This helmet is similar in shape to the Agighiol helmet, but proportionally it is somewhat broader and larger. A large patch of silver sheet has been soldered in place at the left front aspect of the crown, a repair believed to have been done prior to burial.[3] The facial opening is somewhat softened by corners which drop and curve slightly; the jagged profile of the cheek-piece is more pronounced. The same formula is repeated in the large staring eyes and median divisor. The tongue and feather pattern span the top of the eye space and, at a lower step, continue around the helmet body, interrupted by the ear image, but here the hair coil motif is absent. A lively ivy vine trails the lower edge of the

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1. Van Buren, E.D., "Symbols of the Gods in Mesopotamia Art", Analecta Orientalia, 23, 1945, p.84, and p.190, figs. E5a, E5b.

2. Schliemann, 1879, p.192, No. 291.

3. Berciu, 1974, p.94.

neck guard. The leaf recalls the vine of the Vratsa greave at the brow of the goddess image. Here too little horizontal, parallel lines decorate the leaf, but in addition coils spin at the base of the space-shaped leaf. These coils are found on the ivy leaves of the Agighiol helmet. Above the ivy frieze is a frieze of six eight-petalled rosettes, in double outline. Compartments are established separating the design motifs throughout by means of a small bead-chain pattern.

On the left cheek-piece (Fig. 83) there is the image of a long-horned billy-goat with a great round eye very similar to the billy-goat images of the Agighiol situlae and Danubian beaker. All of the same descriptive texturings, features and tip-toe posturing are again found here. On the right cheek-piece is the familiar configuration of the large bird, fish in its beak, pursuing a small, fleeing hare.

The question of the origin of this helmet remains open. If the Agighiol helmet and situlae, the Danubian beaker, and the Detroit helmet could be examined together, the question of origin might possibly be answered by diagnostic analysis. Failing that, and applying what is known today of the locations and probable densities of population of the Getae peoples, it seems reasonable to adopt once more Berciu's suggestion as mentioned in connection with the Danubian beaker

that these forms could have all come from a single location if not a single tomb.[1]

(b) The Coţofenşti Helmet. The Coţofenşti helmet, measuring 25 centimetres in height (minus the crown) and weighing 77 grams, has a rectangular facial opening, again with a minute projection breaking at the centre (Fig. 86). The ear openings are hooded with a very slight overhang which follows only the arch of the straight-sided ear opening.

The eyes follow the familiar formula seen on the Agighiol and Detroit helmets, though they, as all imagery, are worked in higher and richer relief patterns. The strange eyebrows are again cross-hatched, but the framing devices are more elaborate. An overlapping scale pattern moves up the median divisor, and a scroll pattern, alternately turning to the left and to the right and finely textured with dots, lies as a thick cord on three sides of the eye space and continues around the helmet just above the cheek and neck guards. The fourth side of the eye space is treated with a saw-tooth or flame pattern edging a fine cord, a pattern repeated in the space above the arch of the ear openings. The flame pattern was seen, somewhat more modestly worked, on the Poroina rhyton, as a motif placed under

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1. Ibid., p.93.

the eyes of the bull head.

The crown is studded with a pattern of small cones, their surfaces chased overall with fine lines and their bases encircled with dots, a final one at each apex. This decoration has been interpreted both as rosettes and as a hair pattern. The latter seems more appropriate.

On the cheek-pieces there is a scene of sacrifice: a warrior figure wearing an ancient conical-style helmet is kneeling upon a recumbent long-haired ram. The warrior grasps the ram's muzzle with one hand and holds up a short knife in the other. Both arms appear to issue from the same shoulder of a torso having the upper part in front view. The short tunic is textured with a close-set dot pattern, row on row, and probably indicates scale or mail armour. Faint verticals can be seen at the lower edge of the tunic as on the tunic of the warrior figure on the Agighiol helmet. A cap in an even finer dot pattern drapes outward from the shoulders, rippling in decorative folds.

The bizarre trunk-like profile of the warrior is an archaic convention found on articles from Amlash[1] and Luristan.[2] A similar profile is seen on the electrum

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1. Powell, 1971, p.194.

2. Dussaud, R., "Ceinture en bronze du Louristan avec scenes de chasse", Syria, 15, 1934, pp.187-199.

goblet (Fig. 72). T.G.E. Powell points out that Sandars has suggested the sacrifice of the ram imagery on this helmet as a possible prototype for the Mithraic cult scene (though she makes the point by implication only).[1] The Mithraic scene with the bull as victim does not evolve until the 1st century A.D.,[2] making this an early example of this configuration.

On the neck guard there are two friezes separated by a row of spiral decoration. The upper frieze is of four seated monkey-like creatures with human faces, wings and tails, all facing to the left. A single rosette marks the centre point. In the lower frieze there are three winged quadrupeds, the two on the left affronted, and all depicted in a bouncy, rollicking gait. From the jaws of these creatures there hangs the leg of their animal victim. Jacobsthal has labelled this category of creature, with haunch in mouth, the 'Voracious Beasts' convention.

The three Getian helmets share two iconographic features in common: all have large staring eyes with curious eyebrows and all have animal figures. Two also have human figures of quite different traditions. This iconography of myth, even though its precise meaning

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1. Powell, 1971, p.195.

2. Vermaseren, M.J., Mithras, The Secret God, tr. by T. and V. Megaw, London, 1963, p.27.

eludes us, still sets these helmets apart and establishes their significance not as armour, but as articles of ceremony. The eyes have been interpreted as evil-averting, having similar powers to the Gorgonic or Medusa device. Possibly a special capacity of power of vision is being described. Considering the great difference in manner of treatment of the animal styles, that of the Agighiol and Detroit helmets representing one style and the Coţofenşti another, the fact that the eye convention appears similarly in both suggests that it was a firmly established convention within the Getian context.

(c) The Celtic Helmet with Bird Crest. From a cemetery in the extreme northwestern part of Transylvania in the village of Ciumeşti there has been recovered an iron Celtic-style helmet to which a crest in the form of a bird sculpture has been added (Fig. 89).[1] The helmet, which is a standard service helmet of the jockey-cap style with centre knob, has been converted by this crest into a parade or ceremonial helmet. (That such a contrivance could be worn in actual combat seems scarcely likely.) Since this warrior's grave was broken into in 1961 just prior to scientific excavation, the question of dating remains a disputed issue. Different scholars have placed the date of the burial from the late 4th to

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1. Rusu, M. and O. Bandula, Mormintul unei capetenii celtice de la Ciumeşti, Baia Mare, 1970.

the early 2nd century B.C.[1] Without pursuing the intricacies of establishing the date for Celtic material in relatively thinly populated regions far from major centres, it would seem on the basis of other material found at Cuimeşti that the date belongs well towards the end of this time span, namely to the late 3rd-early 2nd century. Along with this helmet there were found fragments of a chain mail tunic with bronze cast buttons, a pair of bronze greaves and a socketed spear head.

The iron Celtic helmet is easily established as representing a type fully evolved by the late 4th century. The helmet belongs to the broad classification designated as the jockey-cap style, having a well-rounded crown, with a centre knob and a small, shallow neck guard shaped like the visor of a riding cap - hence its name. The base for the central knob remains, but the stem has been fitted with a bar, round in cross-section, which serves as the perch for the bird. A bossed, lyre-shaped motif, worked on an additional piece of metal which was attached just above the ear guard, visually counter-balancing it, was a typical treatment on this type of helmet. On the Cuimeşti helmet the three bosses remain on the lyre motif, as do two of three on the ear guard.

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1. Ibid.; Zirra, V., Un cimitir celtic în nord-vestul României, Bucharest, 1967.

The bird sculpture has been constructed from sheet bronze with the exception of the head and leg parts which were cast in bronze. Two elongated ovoid sections have been used to compose the body section: the upper part rather emphatically charged with rhomboidal shapes to represent plumage; the undersection more delicately chased with crescent lines of different scale worked from the front surface. These are superimposed on a texture developed by punch marks which would have been worked from the interior. Oddly the punch marks produce a texture which suggests the skin minus feathers. The superimposed crescents are quite a faithful abstraction of the impression of the very short, frequently slightly curly undercover of the bird's breast and abdomen.

The wings slot between the lower and upper sections, hinged for mobility. From the rectangular flange three tabs have been rolled into round tubes to accommodate the hinge pin. The hinge pin acts as the fulcrum. (The hinge pin is present only on the right wing.) The right wing is interpreted as a replacement on the basis of its different patina and the fact that the surface texture of four diagonal wavy lines is closer to a scallop rather than the more equally measured trough and rise of the crescent of the wavy ripple in the left wing. The wings have been designed by considering silhouette, plane and surface. The flat plane of the wings is an

expressive abstraction of the wing in flight.

The tail has been formed from a sheet of bronze worked in repoussé channelled to express individual feathers. The pattern was treated symetrically, and decoratively as a stylized palmette: a central feather, flanked by two with tips bending towards the centre one, and the two outer ones with the tips turning outward. The tail is thus fan-shaped as is the tail of some species naturally when soaring.

The cast head and neck section is dominated by the enormous rimmed eyes. The neck portion shows evidence of hammering subsequently. This is revealed by the puckered look on the edge of the rim, probably an attempt to reduce it to a size that would accommodate the body portion. The proportion of the eye organ to the cranium is actually quite within the bounds of naturalism if one takes into account the fact that the plumage which would integrate the head and body is not represented.[1] Plumage is suggested on the lower part of the cast head by crescent ridges worked in the original wax model. The beak socket is also rimmed, and the juncture point is emphasized. The fact that

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1. Generally speaking for all types of large predatory birds about 2/3 of the total cranial capacity, not to mention a large part of the brain, is devoted to the organs related to sight. The sense of sight of this type of bird is among the most highly evolved in the entire animal kingdom.

the beak was not cast in one with the head brings to mind the possibility that it was not made of metal, but of some organic material, possibly horn or bone. This is the interpretation that has been given to some bull images for this period where the horn sockets are now empty (including the central disk in the bottom of the Gundestrup cauldron on which there is a bull figure reclining). In this particular case it is not impossible that a real beak was originally inserted, as the scale of the bird is quite within the bounds of reality.[1]

The legs of cast bronze have been modelled in a position of extension, raising the body up from the perch. Plumage has been suggested by means of incising crescents, the scale gradated naturalistically, into the original wax model. The apparent starkness of the legs is largely due to the fact that the feathers of the upper leg, which mask the integration of the leg to the body of the bird, are in no way accounted for here. The proportions are actually quite sound for the bone and musculature development minus the feathers. The claws have been a separate consideration, demarcated by a band which encircles the foot midway.

The bird sculpture has been attached to a perch located where a knob or feather holder appears on this

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1. See section Concerning the Restoration, p.188f.

and other styles of Celtic helmets. It is quite simply an application of the perch to the usual stem projection, not a reconsideration or structured integration of this form to the helmet.

The form is an assemblage of basically geometric units which have been mechanically joined by means of rivets or soldered. A comprehension of the plasticity of metal under pressure - and this is basic to a grasp of raising principles - is not demonstrated. The means by which the whole form has been produced is at a more primitive level. In the sheet construction, the metal has been handled as an essentially homogeneous material, cut, shaped, and placed. It is a fabrication in the truest sense of the word.

The impulse to develop surfaces which would be read as plumage is a persistent theme. Each unit has required separate consideration, all based on naturalism but expressed by several different means: 1) superimposed ridges on the cast head; 2) incisions into the surface of the leg parts; 3) surface undulation by repoussé on the body sections; 4) superimposed ripples on the wings; 5) silhouette of individual feather shapes composing the tail. The unifying element in all of these different solutions has been to express the idea of feather.

The posture is that of the bird in flight, with head, tail and wings in their full physical extension.

The mobile wings are again another level of development towards realism. All in all the bird sculpture is a peculiar blend of naturalism and geometric pattern. The posture is natural and the means of depicting the features on the surface is geometric.

By comparison the helmet which was raised from a disk of iron involved technically a much more difficult procedure. That the larger, thicker and more resistant disk of iron was physically the more arduous physical task is but a minor point. The skill required of the smith to form a helmet has already been mentioned.

It has been noted that the cast head-neck connecting piece or collar has been hammered at the neck rim subsequently, and that the puckering is still in evidence. This does not indicate a great deal of control being exercised during the development of this form. The smith who could produce such a helmet could certainly have produced a very different bird sculpture, while the craftsman or men producing the bird form have not displayed the expertise to produce an iron helmet. That the entire form, helmet and bird crest, need not necessarily have been imported into the area is shown by the level of technical capacity demonstrated generally by the Getae-Dacian artefacts of the period prior to the current with the Celtic strata at Cuimeşti, or about 230-130 B.C.

(d) The Celtic Bird Image and Its Significance. The Celts, by and large, were not great producers of sculpture. Their animal images, including birds, are not as interestingly handled, and do not reach nearly the same level of articulation, as some of their design motifs.[1]

There is, however, one fine example of a Celtic bird which bears strong stylistic similarities to the bird sculpture just discussed. This is the bird of the cast Jungferteinitz fibula dated to 350-300 B.C.[2] The bird, in the act of pouncing on the back of a sheep, has a short curving beak and large, carefully engraved eyes, characteristic features of the predatory type bird. The neck is collared; the talons ornamentalized; and a pattern developed of little punched squares covers the body. The sickle-shaped wings have an emphatic rhomboid pattern, a cross-hatching or basketry pattern in use around 300 B.C.[3] The tail is a unit, a decorative treatment of a palmette, and is ringed, thereby setting it off from the body. This ring or collar is also cross-hatched, and the body itself outlined down the

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1. Jacobsthal, 1944, p.22.

2. Ibid., pl. 161, fig. 318; p.30. "...is the best of Celtic birds and important because it can be proved to be a copy of a definite Eastern model, i.e., the silver ornament of a cuirass from the second kurgan of the Seven Brothers mound, dated about 450-40 B.C.", pl. 221f.

3. Ibid., p.74.

side. The geometric stylization of this little bird image which is only 2.4 centimetres in length bears in general a good likeness to the bird sculpture.

For the origin of the bird type we look eastward, and find an example in the ornament of a silver cuirass from the second kurgan of the Seven Brothers tumulus in the region of the Kuban River, dated about 450-540 B.C.[1] Jacobsthal has described this silver ornament as 'Greek, slightly Iranizing'.[2] However, the elk and reindeer do not appear in the Greek decorative arts,[3] and this example reveals a rather straightforward combining of two currents, one from the northern steppes, the other from the south and ultimately from Mesopotamia.[4] Here the bird image is seen from above, as a purely oriental decoration, a two-dimensional scheme very similar to the bird of the Jungfernteinitz fibula.

(e) The Celtic War God and his associations with Birds.

The necessarily largely deductive interpretation of the Celtic religion has resulted in contradictions which have lingered since the days of the first literary assessments made by the Greeks and Romans. They drew parallels between their gods and the Celtic gods just as

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1. See note 2, p.184.
2. Ibid., p.30.
3. Rostovtzeff, 1922, p.54.
4. Ibid.

they did for the Thracian pantheon. It is now known that the Celtic gods do not equate directly, any more than the Thracian gods, in meaning, function or attribute, to those of the Greeks or Romans. Nor are they consistent in the Celtic world from one region to another.[1] Even in Celtic times their own assignments were modified and shifted.

The god in any heroic society will, at certain times, be manifest as a divine warrior.[2] As a leader of this people he has many functions which do not necessarily disappear when the stress on his role as war leader and protector of his people has been brought to the fore. The Celts' relationship with the Romans was most emphatically martial in nature, and this aspect of his total functions tended to be overstressed in their interpretation. The Romans over-simplified a principal Celtic tribal god, equating his function with that of Mars. His complementary role as healer, user of magical herbs and restorer of life was overlooked.

A good example of the warrior god image, though it is later than our period, is a small bronze cast Mars

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1. Ross, 1967, p.4. "...a study of the whole (Celtic context) reveals a basic homogeneity of religious attitudes amongst the Celts which overcomes all regional and economic variations and which is surprising in its persistence. It allows us to talk about pagan Celtic religion, provided we allow for this something less than a religious system and think rather in terms of religious attitudes and tendencies."

2. Ibid., p.168.

image from Southbroom, Wiltshire.[1] It is wearing a helmet with a bird perched on top, and holding a ram-headed serpent in each hand as a symbol of his healing powers. By this time the local warrior god was taking on the significance of the Roman god Mars.

Some of the other functions seem also to be more pronounced regionally or at some periods. These include his connections with trade and commerce. In short, the tribal god of the Celts was not only the ensurer of martial success, but the protector of the tribe in general. In the same vein the Celtic warrior image has perhaps developed disproportionately and to the exclusion of a fuller appreciation of the other activities of the warrior which were vital to the maintenance of Celtic society.

Numerous animals and birds were associated with the Celtic gods. Birds were used as symbols of divinity, and in association with gods at times functioning as their messengers.[2] Some species were given importance for only a specific period (such as the eagle, owl, and goose) and others were to enjoy exceptional longevity (as the raven, swan and crane).

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1. See British Museum Guide, Roman Britain, 1958, p.XVII.

2. Ross, 1967, p.234.

The Celtic bird image frequently associated with martial activities is the raven. The role of the raven in the entire Celtic tradition is as a bird of omen, possessing outstanding intelligence and in particular concerned with the battlefield.[1] As such, it was associated with any deity accredited with exceptional knowledge, skill and martial abilities.

Whether this bird sculpture was intended to represent a specific bird is not being questioned here. It is, however, important to appreciate that the general theme of the messenger in the form of a bird of special powers is found in close association with the warrior figure in both societies. The bird image used in Thraco-Getian art is discussed more fully in connection with the Thracian horseman theme (p.214).

(f) Concerning the Restoration. Two points of contention have been raised in the author's mind concerning the restoration of this sculpture. They were derived from the analysis of the execution of the bird form which necessitated the study of bird anatomy and flight mechanisms. One concerns the beak, a restored part, and the second the position of the wings.

The beak has been restored on the assumption that this represents a predatory bird which is not necessarily

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1. Ibid., p.251.

correct. There is no existing species inhabiting that general zone today, nor one in a greatly extended zone, with a beak of these proportions. This point is minor, however, in comparison to the second criticism concerning the position of the wings. The criticism may be expressed by three questions: 1) what are the ripples on the surface of the wings intended to indicate; 2) what does the shape of the tip of the wing signify relative to the tip feathers on a large predatory bird; 3) what is the significance of the notch on the back edge of the wing?

The rippling lines across the surface of the wing could be simply decorative lines. However, if we extend the persistent theme of crescents which indicate the tip margin of the various kinds of feathers, it is meaningless here. If the wings are simply reversed, each changing sides, the crescents could be read as the tip margins of the wing feathers growing from the body outward in increasingly larger curving tiers as they naturally appear (secondary and margin coverts, secondary and primary coverts, secondary flights and primary flights with the slotted primaries on the very tip of the wing). The ripples could meaningfully be read as an abstraction of the tiers of different feathers. The large predatory bird wing structure accommodates soaring ability and as such has particularly agile or flexible feathers - the slotted primaries - which easily flip at

the very tips and thus spill air for changing directions while soaring. If the wing is reversed this feature is supported by the angle of the tip of the wing which slants then outward. In this sculpture this feature does not exist and in fact the tip shape is without meaning. Thirdly, the notch on the back edge of the wing does not exist in this category of birds, since the secondary flight feathers next to the body run parallel, ending in a straight line, right up to the body without break. If the wing is reversed this notch can be seen as an abstraction of a major feature, a joint in the wing's bone relationships. When the wing is folded this joint area is called the shoulder (though wrongly; actually it is equivalent to the wrist joint of the human arm). At any rate it is visually the dominant joint feature of the bird's wing generally, the one that catches our eye when the position of the wing changes. With the wings reversed to opposite sides, all of these features fall into place and become descriptively operative, Lastly, the wings now tend to hang forward of the centre of weight of the bird sculpture. Reversed their weight falls more logically over the centre of the helmet, where it should be, recalling that this was a functional form intended to be worn, even if for only brief periods.

THE GREAVE

A form of leg armour, the greave, was in use as early as the Greek Bronze Age. The earliest known example, a simple shin-guard, was found in 1960 in the chambered burial tomb of a warrior at Dendra a few miles southeast of Mycenae.[1] For the late Mycenaean period only one pair of greaves has been found in Greece itself, one at Kallithea and two others dated somewhat earlier at Enkomi in Cyprus. These are relatively primitive examples of greaves formed as elliptical plates of hammered bronze. For the Dark Ages there is no evidence of metal armour having been produced in Greece.

It is not until towards the end of the 8th century B.C. that there is again evidence of metal-working activity in Greece, as seen in a cuirass which has been found in Greece and has been dated to that period. This cuirass has the basic features of the cuirass of Dendra dated to the late Mycenaean times or about 700 years earlier, though this does not suggest continuity. Rather Snodgrass maintains that the art of armour manufacture may well have been relearned by the Greeks from some of their former clients in trade from Central Europe, France and Italy, i.e. from peoples of the Urnfeld culture.[2] Abundant evidence attests to

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1. Snodgrass, 1967, pp.24-25.

2. Ibid., p.41.

substantial two-way trade between Mycenae and Central Europe with Mycenaean armour among the goods imported there. In recovering from the Dark Ages and commencing their colonial activities, the Greeks came into contact once again with their European neighbours and their products. The style of cuirass then being produced in Central Europe and Italy was a somewhat modified version of late Mycenaean age armour which had remained in production among the Urnfeld peoples then enjoying prosperous times.

The greave reappears in metal at a slightly later date than does the cuirass and helmet, with the earliest evidence being found in vase painting dated to about 675 B.C.[1] The greave is now longer, covering the knee cap, running the length of the shin to the instep, and is without lacing. The 6th and 5th century greave continues in this close fitting, snap-on variety.

By the time of the Peloponnesian War in 431, lightweight armour for the cavalry was gaining new importance. Greaves were now replaced by leather boots. By the end of the 5th century metal greaves were obsolete in Greece because of changes in battle tactics; however, examples are still to be found occasionally in Greece and in the regions beyond the frontier. Later on, the greave was brought back into use by Alexander the Great who armed

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1. Ibid., p.52.

his troops with both greaves and helmets. Greaves apparently remained in use in Southern Italy, by both Greeks and Italians, until the 4th century B.C.

The greave, it would appear, was more frequently an optional form of armour, or dispensed with entirely for periods of time, in contradistinction to some other pieces of armour. This was largely due to changing battle tactics when emphasis was placed on lightweight armour. Not invariably, but at times, the use of the greave was coordinated with the shield, and when this was large, the greave might be dispensed with entirely.

By late Republican times the only Roman soldiers on active service wearing greaves were the centurions.[1] This suggests that the greave was then worn as a mark of distinction in rank and little else. The greave did continue in use in the cavalry sport exhibitions, the hippika gymnasia, tournaments produced by the Roman army to entertain, and no doubt to impress, the civilian populations of the frontier regions of the empire. The cavalry sport greave was lightweight, frequently elaborately embossed, and sometimes constructed in two parts for the flexibility required in a mounted position. The shin plate, which extended to just below the knee, hinged to the knee shield. Both parts covered only the front aspect of the leg and were held in place by straps

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1. Robinson, 1975, p.187.

which crossed horizontally at the ankle, calf and behind the knee with additional diagonal ones stabilizing the weight dragging downward. They were an altogether inefficient form, meeting the requirement of visual appeal, but hardly functional as serviceable armour.

Method of Manufacture

The form of the greave underwent considerable modification throughout its long period of manufacture which extended from Mycenaean times until the late Roman period when the metal greave fell into disuse for some many centuries. These modifications in form were due to many factors: changing levels of technical skill which both increased and again diminished at times; changing economics - for armour was always costly; changing battle techniques; new uses, the development of arena games and sporting exhibitions, and religious-political ceremonies in which armour was worn. In these final categories the greave form, functioning symbolically, is no longer actual armour, but a part of a gorgeous military costume worn for a social function.

While the greave is a simple-looking piece of armour, technically it can require a rather refined degree of smithing control, depending on its type. The abbreviated greave, which covers only the shin, is open

in the back, joins with adjustable closures, and is not full length. It could be so generalized in shape and size as to be capable of mass production. However, the full-length greave which extended above the knee and is shaped over the instep could be contoured to an obviously close fit. Regardless of the suggested anatomical detail on the surface (as a decorative abstraction in fashion for a period of time) the proportions of length, girth and displacement of the bulk of the musculature would have to be individualized. This degree of accuracy in shaping a functional form from sheet metal can only be realized by a craftsman who understands the principles of true raising. On the other hand, the cavalry sport greaves of late Roman times, showy as they are, obviously required far less smithing skill.

The Mycenaean type of greave was generally less than 30 cm in height, lined, and held in place with wire lacing or with metal clasps.[1] Even in this early period the problem of producing a brass alloy having a springy quality was apparently solved to make a lightweight form which clasped the leg. It has been conjectured that the alloy used resembled "latten" brass, an alloy of copper, zinc, lead and tin used in medieval

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1. Snodgrass, A.M., Early Greek Armour and Weapons, Edinburgh, 1964, p.86.

brasses and church articles.[1]

By the 7th century this type of greave had become very lightweight, longer, approaching 40 cm on average, and held in place solely by the elasticity developed in the form itself. The lining would have at all times provided a modest cushion, and acted to moderate temperature. The early laced type, however, probably continued to be made until late in the Classical period.[2] Again latten brass has been suggested as the most probable alloy used for the highly refined 7th century version of the clasping greave. Ashdown's observation that this kind of greave was probably moulded from casts is very much to the point.[3] Development of a metal form so perfect in fit would not be possible unless the craftsman could make fittings to the actual leg, or a replica, during the manufacturing process itself.

This snap-on greave of the 7th century, which remained virtually unchanged for some centuries, represents the peak of smithing perfection in producing wearable leg armour, lightweight, elastic and totally functional. The

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1. Ashdown, C.H., British and Continental Arms and Armour, New York, 1970, unabridged republication of British and Foreign Arms and Armour, T.C. and E.C. Jack, London and Edinburgh, 1909.

2. Snodgrass, 1964, p.86.

3. Ashdown, 1970, p.30.

property of hardening[1] was exploited by the smith to endow the form with its special quality of springiness. If the greave thus moulded or contoured, regardless of alloy, had been subjected to any heating or annealing procedure[2] subsequent to final shaping, the molecules so structured through hammering would have been realigned and the greave would no longer function as a snap-on device. The metal would be "dead", and the cuff, once sprung, would stay stretched apart.

Silver would prove one of the more inferior metals for greave production because it is not as tough volume for volume as some bronze alloys, nor could any silver alloy known then have the degree of permanent springiness which some bronze alloys can have. Silver greaves therefore would have been for parade and ceremonial use, or possibly produced for funerary gifts, but not among the Greeks after the 6th century. By that time the Greeks no longer buried armour with their warriors.

Luxury or parade armour, which is the category under specific consideration, allowed the maker again more freedom in fit, extravagance of shape, choice of material and manner of execution since it was not used under conditions of great physical stress, nor presumably worn

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1. See Glossary, s.v. work hardening.

2. See Glossary, s.v. annealing.

for very long periods of time. Indeed, these luxury greaves could scarcely have functioned as true armour at all because all of these factors were exploited rather freely; they were loose fitting, cumbersome in shape and made of silver.

Thracian Greaves

To date only three burials have yielded metal greaves in Thrace. The pair of bronze greaves was found at Assenovgrad with the maker's name stamped on the inside in Doric dialect. These greaves, which have been dated to the late 5th early 4th century B.C., are worked with a geometricised abstraction of the leg musculature. Two silver greaves were recovered in the Agighiol tomb burial on the Dobrudgea, Romania (Figs. 92-94), and a single greave, also silver, was found at Vratsa, Bulgaria (Figs. 95-98). The idea of facial imagery at the knee is not new; it was in use by Greek armourers at least in the mid-6th century (Fig. 91).

The two greaves from Agighiol are not a pair, being similarly contoured assymetrically (Figs. 93-94). Nor is it probable that they were ever intended for other than ceremonial use, or possibly as funerary goods. There is no evidence that the greave was in use among the Getae in the La Tène period.

They bear strong affinities, especially the greave in Fig. 95, to a silver-gilt greave found at the Mogilanska Mound near Vratsa, Bulgaria. The Vratsa greave is dated to 380-350 B.C. and hence all three greaves belong to at least the first half of the 4th century period.

The Agighiol greave in Fig. 92 (left, and to be referred to in the text as greave No. 1) is .478 m in height and apparently formed from two separately worked parts enriched in repoussé. The sheath is basically a simple vertical fold of metal which has not been contoured to any pronounced degree, while the upper portion, the knee guard, was bossed up from an ovoid sheet. The method of fastening the greave, which is the same for both Agighiol greaves, is evident in Fig. 92. Simple holes have been punched, through which some flexible material, such as leather or cording, possibly even metal wires, must have been tied.

The manner of treatment is typically Thracian-Getian for this period; the natural form is geometricised and lacks an organic sense of movement or flow from one feature to the next. There is no blooming sense of expanding mass as in a living form. The concept of multiplanary integration is uncomprehended by the artist, hence each feature, decoratively treated, remains in isolation, as is well demonstrated by the

Poroina rhyton. The hair on the head of the goddess image has been stylized into cone shapes that terminate in awkward miniature fist shapes, with linear engraving on these forms running counter to the flow of the form itself. By comparison, the hair treatment on the goddess image of the Vratsa greave has been accomplished by more modest repoussé combined with very careful linear chasing. The two techniques, repoussé and chasing, worked in sympathetic balance have produced a convincing texture which is read as a stylization of hair. Turning for the moment to greave No. 2 from Agighiol which is .46 m in height and highlighted with gilding, the hair treatment falls somewhere between the other two examples. In places the energy is a more leisurely "S", rather than the crisp "C" of the Vratsa type curls, whereas in the Agighiol greave No. 1 the energy has been halted by the stiff cone image and the flow destroyed by the counter-hatching. The two Agighiol greaves were surely not made by the same artist.

The fragments of a gold helmet dated to the 5th century were found among the articles of the Băiceni Treasure discovered at Cucuteni-Băiceni (Iaşi District) in 1962.[1] In this example, which remains unpublished, the manner of treatment of the conical crown is most similar to the Agighiol greave No. 1.

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1. Treasures from Romania, 1971, p.48, Fig. 140.

The jewellery images themselves are not without interest, and their very presence is an argument for the interpretation that these are goddess images, and not the conventional Medusa images so frequently used on armour at this period. The statues of gods and goddesses were adorned with gold and silver and wore elaborate jewellery as early as the 8th century B.C.[1] The Gorgonic and Medusa head imagery underwent long evolutionary changes, and these led eventually to the beautiful Medusa image of the later period. However, jewellery was not one of the customary features associated with this image.

It is the intention of the adorning of a goddess image, not a Gorgonic image, that is being dealt with here. On greave No. 1 the jewellery types have origins in Greek, Scythian and Dacian forms. The twisted diadem worn at the hairline on greave No. 1 and the Vratsa greave is an Eastern convention, a mark of authority used on god images and by royalty. The head portion and necklace of <u>amphorae</u> recall the silver head sculpture found at Peretu near Bucharest and dated to the 4th century B.C. (Fig. 99). The <u>amphorae</u> necklace on the greave, which here terminates in palmettes, was a type widespread in the Greek-influenced world in this

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1. Maxwell-Hyslop, K.R., <u>Western Asiatic Jewellery, c. 3000-612 B.C.</u>, London, 1971, p.250.

period. The motif is found treated in jewellery forms of varying degrees of elegance from the cheap stamped mass-produced examples through to exquisite granulated and filigree versions that represent private commission work. The miniature amphora was a popular symbol employed in both necklaces and earrings especially during the 5th through to the 3rd century B.C.[1] This was also a period when vast quantities of wine and oil were exported from Greece. A similarly-shaped pendant used in the identical way on a necklace represents a flower bud.[2]

The earrings which are shown strangely orientated (hooking forward) in the pierced ears are similar to a somewhat simpler version of this basic shape which has been identified as Scythian in origin (Figs. 100, 101).[3] Examples have been found in the area north of the Black Sea, Romania, Hungary, and southward into Bulgaria, the earliest dated to the mid-6th century B.C. (see map, Fig. 101). Numerous variations represent the basic form of a cone with a hooking wire enlarged at the end

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1. For an example of earrings with pendant in the form of miniature amphorae see Venedikov, 1975, fig. 195.

2. Higgins, R., Jewellery from Classical Lands, British Museum Guide, 1976, p.20; pl. B, fig. 7.

3. Vasiliev (Vassiliev), V., "Podoabe de Metal Preţios din Mormente Scitice in Transilvania", Acta Musei Napocensis, VI, Cluj, 1970.
For an example of this kind of earring see Amandry, P., Collection Hélène Stathatos des Bijoux Antiques, Strasbourg, 1953, p.139, No.279/80, pl. LII.

for its hanger.

According to Berciu the torque image on greave No. 1 is typical of later Dacian jewellery which developed from proto-Hallstattian types.[1] It represents a twisted type of torque formed from several strands of wires twisted, or rather coiled, in the centre part, and carried out in a bundle to the ends where a hook is formulated as a means of fastening.

The two sides of the Agighiol greave No. 1 are treated quite differently. The right side (reading from the photograph) bears a strong similarity to the total imagery of greave No. 2, according to the drawings of D. Pecurariu,[2] and to the Vratsa greave. The Vratsa greave has a far more ambitious programme and is more skilfully executed than the Agighiol greaves. However, in terms of imagery content, the Agighiol greave No. 1 remains the most involved piece by far.

All three greaves share the common feature (twice stated on greave No. 2) of prominent bosses from which serpents emerge. These coiled forms, placed on either side of the shin portion, have been interpreted as snail shells.[3] This interpretation of the coil image has no

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1. Berciu, 1969, p.46.

2. Ibid.

3. Venedikov, I., Thracian Treasures from Bulgaria, exhibition catalogue, British Museum, 1976, p.66.

other evidence to support it, no other features of the snail anatomy, nor demarcation of where the snail shells end and serpents begin. Comparison of the four versions does reveal a gradual change of scale of texture, or change to a different texture running the length of the serpent into the coil, but absolutely no other feature. Also, the snail was not a common image in Thracian art.

On the left side of greave No. 1 there are the images of two warriors wearing tight-fitting garments, cross-hatched in a diamond pattern, probably suggesting a type of scale armour, the lorica squamata.[1] Their hair is indicated by a scalloped outline which may suggest curly hair. The uppermost warrior is riding on a small prancing horse with a clipped mane and tail, and is tête-à-tête with the lowered head of the serpent which is descending from the boss. Its mouth is open with a tri-pronged tongue protruding. The warrior carries high in his right hand a bow, probably representing the composite bow or "Cupid's bow" known to the Scythians and by this late period to the Greeks as well. The Persians, who had a strong tradition in bowmanship, also

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1. Lorica squamata, a form of scale armour developed by the Assyrians in which overlapping lamellae were attached to a linen or leather tunic. Persians and Romans also used this type of armour; Greek evidence is slender.
See Robinson, 1975, pp.153-161 and fig. 445 of the grave stele from Carnuntum on which a similar diamond pattern has been interpreted as indicating lorica squamata.

used the composite bow. The bow as a symbol of royal power pre-dates the Achaemenian period,[1] when it is found used also for this purpose, and it continued in use in this sphere into the Sasanian period.

In the warrior image below, the figure is seated on a low-backed chair. He is holding a bird, head down and with outstretched wings, in his right hand and a rhyton in his left hand. As on the rhyta, tiara plaque and rings discussed previously, the imagery on this side of the greave brings into close proximity the horse, horseman, rhyton and throne or chair with the new attributes, the bow and bird, both held in hand. These configurations centre around the theme of the Thracian horseman, to be returned to shortly.

The right side of greave No. 1 is dominated by a group of features which suggest a bird image, its large wing filling most of the space on this side. This same imagery, more finely expressed, is found on both sides of greave No. 2. However, the most elaborate development of this theme is on the Vratsa greave, though here too the two sides differ, only the left side being treated fully with this theme. On the right side the space is divided with horizontal lines.

In the drawings of greave No. 2 the bird image is suggested by the head of a bird with a long sharp beak

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1. Ghirshman, 1963, p.269.

and a backswept crest placed on a long vertical column. This is poised between two others of similar nature. The line behind the head sweeps languidly upward forming the edge of a wing with a whorl denoting the "shoulder" patch of the wing. The type of bird this imagery brings to mind is a long-legged marsh bird such as crane, heron or egret, bird types which incidentally do inhabit the extensive marshlands of the Dobrudgea. More importantly the marsh birds of this type were closely associated with the solar deities in their role as gods of healing.[1] Birds of the crane family were frequently associated with horses on early representations, and the horse is especially connected with solar cults which flourished in this region at this period. Such an association would not be inappropriate for a piece of ceremonial armour.

The Vratsa Greave

The Vratsa greave, dated to the first half of the 4th century B.C., was discovered at Mogilanka Mogila, Bulgaria, in what is believed to be the burial of a Triballi leader (Fig. 95).[2] The greave is 46 cm in height and made of silver with details highlighted with

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1. Ross, 1967, p.279.

2. Venedikov, I., Archaeologia, 1966, No. 2, p.12.

gilding. While this greave contains some of the same imagery and themes as the Agighiol greaves, no human figural imagery has been included other than the head image at the knee portion. The main decoration of the shin portion has animal imagery (the lion, serpent and bird), all used in part and in whole.

As on Agighiol greave No. 1 a diadem has been placed at the hairline. A vine, depicted as a continuous stalk, undulates across the forehead, but the leaves point towards the centre as do the leaves of a victory wreath. The leaves are spade-shaped and decorated with parallel lines. The forward-staring eyes, rimed in gilt cording, have small indentations which probably held glass incrustations. Down the left side of the face there are horizontal stripes formulated by what appears to be strips of metal inlay. This may have reference to facial tattooing which it is well known was practised by the Thracian women.[1] The ears are high-placed and facing forward, a feature characteristic of the Gorgonic or Medusa head, a theme commonly represented on Greek armour of an earlier period. The features of the Medusa type head are this ear placement, the evil-averting stare of the lidless eyes, and in the later development of the Medusa type, the suggestion of coiled

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1. Athenaeus, V, xii, 524, p.365.

serpents as hair.[1] However, the mouth here is small and closed unlike the typical Medusa type which has a wide open mouth with long protruding tongue.

Immediately under the ears are bird images which clutch the serpents which descend from the head down the jawline. These serpents which have feather-pattern scales terminate in the image of an attacking lion. This is not a typical protome in that the whole image of the lion's body is superimposed on the serpents' bodies, not integrated by using only the head or head and fore-parts. The body with large head and flame-like ruff, ears flattened, is crouching as if to pounce. The mouth open and teeth bared is the standard lion grimace, long in circulation in the Near East and in Asia Minor. These lion-serpents appear to have no other objective than mutual confrontation. Their attention is not directed to the serpents below them which originate from the bosses on each shoulder.

The bodies of these second serpents, also covered in a feather-pattern, terminate in a lion head, a true protome. This head is formed loosely as if two profiles were joined at the centre. This convention of two profiles joined, to be read as a three-dimensional representation, is found commonly in Scythian and

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1. Wilson, L.M., "Contributions of Greek Art to the Medusa Myth", American Journal of Archaeology, 24, 1920, pp.232-240.

Thracian art, a split-body image not unlike the appearance of an actual animal pelt.

This motif of the lion griffin was well established in Achaemenian art and it was obviously known and accurately expressed in both Scythian and Thracian art, but in accordance with their manner. In the Achaemenian style the whiskers of the feline appear as a bundle of horizontal lines radiating to each side of a median line which starts just below the nostrils and bisects the end of the muzzle. At times the division is made by using a line bisecting a "V"-shaped centre section.[1] In this example the whisker lines, which would wrap around each half of the end of the muzzle, have been split up the median line and laid to each side of the head. The cheek curl here appears as a coil under each eye. Normally it runs from the base of the rounded, feline ear, tracing the jawbone to the animal's open maw.

This lion griffin protome is directed towards the bird and serpent below. This group, the serpent subdued by the bird, here clutched but frequently held in the beak, introduces an ancient and celebrated mythological theme of Eastern art and literature. It is the tale of the natural animosity and distrust that these two species hold for each other and which results in

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1. Wilkerson, C.K., "Assyrian and Persian Art", Metropolitan Museum of Art Bulletin, March, 1955, pp.213-224; see p.220f.

perpetual conflict, much of which takes place in the tree of life. Evidence of this theme is found in the Thracian context,[1] and at times it is used in conjunction with portrayals of the Thracian horseman (see Fig. 11).

On the left side of the Vratsa greave the bird with spread wing is shown clutching the serpent's body and on the right side only a spread wing radiates off the neck of the serpent. Also on the right side a cross-hatched border, which follows the length of the serpent, terminates in the curve of the neck of the serpent in a small knob. This detail is absent from the left side of the greave, but present in the front of the bird image on the two Agighiol greaves. The necks of these serpents are also treated differently.

The long, lank bodies of the subdued serpents trailing down the front of the greave are treated in the standard feather-pattern, here running down the body. Their bodies hang in a natural dead fall, probably intended to indicate death or sleep, with the tip of the tail curling decoratively.

The head of the serpent presents a complex group of features: flame-ruff as of the lion, open mouth with fangs, up-tilting snout, eyes in front view, and a sharp, forward-tilting ear which resolves into an ear coil. A

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1. Youroukova, Y., Coins of the Ancient Thracians, tr. V. Athanassov, Oxford, 1976, p.8.

corded ridge outlines the snout and head separating it from the ruff pattern. A similar ridge runs down the neck. Obviously several animals are referred to here.

The configuration of serpent with open mouth, snout and forward-tilting ears appears early on the gold bowl dated to the 9th century B.C. from the necropolis at Hasanlu, southwest from Lake Urmia.[1] In the scene a three-headed dragon lunges forward as if to attack. Two male figures directly in front of the dragon are engaged in fisticuffs.

Rostovtzeff speaks of the "well-known dragon with the characteristic crest, long ears and sharp teeth", a type found in the South Russian steppe during the last centuries before Christ and the first centuries of our era.[2] A fine example of this dragon type is found in an ivory staff handle now in the British Museum. It is tentatively assigned a provenance of Kuyunjik (Nineveh) (Fig. 102), and a probable time, the Parthian period (2nd century B.C. - 3rd century A.D.).[3]

The ear-coil motif is of Eastern origin and beautifully expressed in three dimensions in the wolf-like animals of the two flagons from Basse-Yutz, Lorraine,

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1. Ghirshman, 1963, fig. 31.
2. Rostovtzeff, 1922, p.192, pl. XXIV, 2,3.
3. Rostovtzeff, 1929, pl. II.

France, examples of early La Tène metalwork. This configuration of ear-coil, long narrow snout with up-tilted tip, and bared fangs is found in Celtic art[1] and also in Scythian.[2]

In the Thracian context, for this period there is a serpent dragon to be seen in the example of the silver gilt phalera for a horse harness found at Letnitza (Lovech District) in Bulgaria (Fig. 103). There the three-headed serpent dragon is seen with up-tilted snout, and the sharp-tipped ears flattened onto the heads, seen from above. A later example of a serpent dragon is found on Trajan's column which was erected in Rome to celebrate the Roman victory over the Dacians in 107 A.D. (Fig. 104). There is to be seen a wolf-headed dragon. A three-dimensional scale replica of this serpent dragon, produced in metal, exists at the Museum of the Iron Gates at Drobeta, Romania. The mouth is open baring the incisors of the carnivore, pointed ears tilted forward, and the body undulating in a wave pattern. This symbol was used by the Cimmerians in the late Iron Age.[3] The association of the serpent dragon or flying dragon has been interpreted as being

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1. Jacobsthal, 1944. See Vol. I concerning the Lorraine flagons for a detailed analysis of the wolf-like animal.

2. Rudenko, 1970, p.174, pl. 117c.

3. Părvan, 1972, p.114.

exclusively with the theme of death.[1] The dragon was the devourer of corpses; hence its use as a symbol of terror for a war-banner.[2]

The ridge or crest running down the back of the serpent's neck on the Vratsa greave is a feature not present in these other examples. It is however present in representations on Trajan's column of the war trumpet (the carnyx) which has the other features as well (Fig. 105).[3] Another example of the carnyx is seen in the imagery on plaque "E" of the Gundestrup cauldron (Fig. 2).

On all three greaves the serpent and bird are brought together in different relationships, confronted or captured. Evidence of the use of this theme for this period is widespread and found in the Thracian world in the coinage of the Odrysaean rulers as well as in that of their neighbours, dating from the late 5th century onwards.[4] In most versions the eagle is shown from above with wings outstretched and with the head turned to the left, the serpent wriggling in its mouth.

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1. Davidson, 1964, p.161. "The concept of the flying dragon undoubtedly came from the East ...."
2. Ibid.
3. Părvan, 1972, pp.114-115.
4. Youroukova, 1976, p.8.

The Thracian Horseman

The image of the hunter or warrior on horseback found commonly in this region is not a Thracian invention, but an adoption of a well-established convention which came from the East. The mounted huntor or warrior image was a military-religious symbol originating in the Assyrian and Babylonian cultures. This symbol was carried eastward into the Irano-Indian sphere and westward into the Thraco-Getian one. This symbol served many cultures for centuries to represent both major and minor gods: Apollo, Helios, Mithra, and even at times Zeus. Two of these images used as a reflective pair affronting represented the Dioscuri. By the 3rd century A.D. the Sasanian dynasty used this convention to symbolize the power of the king depicted in the act of hunting, bow or sword in hand.

The Thracian religion had much in common with that of the Persians and Scythians.[1] There are affinities between the Phrygian Cybele and the nocturnal and orgiastic celebrations of her cult and the goddess Bendis.[2] As a great goddess figure, her worship was widespread among both the Thracians and Getae,[3] and her

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1. Marazov, 1977, p.17.

2. Ibid., pp.23-24.

3. Crişan, I., Burebista şi epoca sa, Bucharest, 1977, p.459.

cult was made official in Athens in 429-428 B.C.[1] As a guardian of fertility, the sow was the sacrificial animal of Bendis, thus her association with death is implied. Her capacity as a protectress over all life is announced by her bearing arms, which usually include at least one spear.[2] It is most probable that she or a related goddess is represented on the knee shield of the Vratsa greave as well as those of the Agighiol greaves (see Figs. 92, 95).

The principal god of the Thracian religion is commonly referred to as the Thracian or Danubian horseman and was known in Roman times more simply as 'hero'. Over 3000 representations of this figure have been recovered in Thrace attesting to his widespread popularity and durability.

The belief in immortality was a central principle of Thracian and Getian religion which separated it markedly from the religion of the Greeks for whom death brought only a drab, unchanging existence. Immortality was contained in the tenets of the Dionysian cult which surely flourished in Thrace. Indeed, Thrace was the home of Dionysus, according to some scholars.[3] The

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1. Marazov, 1977, p.22.

2. Ibid., pp.22-23.

3. Guthrie, W.K.C., The Greeks and Their Gods, London, 1950, p.317.

essential theme of the story of Dionysus is repeated in the legend concerning the Getian god Zalmoxis who had also lived, died and reappeared once more on earth.[1] He offered the gift of immortality to those who participated in the feasts held in his great hall. In a somewhat later period, certainly by the early centuries of our era, the Mithraic cult made a firm stand in the lower Danubian region. The largest Mithraeum so far discovered is at Sarmizegetusa in the southwestern Carpathian Mountains of Romania.[2]

Mithra, the ancient god of light, justice, and obedience, was reinstated into a prominent position in Achaemenian times, and by the last centuries before Christ, he was the central figure in a mystery cult.[3] This cult, which also promised immortality and a happier life to come to the soldier, obviously had a great appeal to men of war, who invoked his protection before battle. The fact that Mithraism spread so rapidly over very long distances was largely due to its military

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1. Eliade, M., De Zalmoxis a Gengis-Khan, Paris, 1970, pp.31-80.

2. Vermaseren, 1963, p.62.

3. Cumont, F., The Mysteries of Mithras, tr. T.J. McCormack (unabridged reprint of 2nd revised ed., 1903), New York, 1957, p.2. "...it will be sufficient for us to state that the tribes of Iran never ceased to worship Mithras from their first assumption of worldly power till the day of their conversion to Islam."

following, and secondarily that by slaves, both groups being shifted in fair numbers from the eastern provinces to western locations, especially port cities.[1] The cult spread by the water routes, up the Danube and Rhine valleys.

In the representations of Mithra - in high and low reliefs, statues, paintings and mosaics - relatively few programmes were devised, but a very important one was Mithra as hunter on horseback with bow in hand. A great number of such representations came from the East, especially from Syria.[2]

The hunt is an ancient Eastern theme with an allegorical meaning.[3] The hunt was considered to be a practice ground for physical hardiness as well as for displaying moral virtue, daring and judgment in confronting brute force and violence.[4] The hunt had a religious significance as well, since dangerous beasts could only be subdued and killed with the help of the gods. Mithra stood as a champion against the powers of evil and he had the gift of infallibility; his arrows never missed their target.[5]

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1. Ibid., Ch. 2, The Dissemination of Mithraism in The Roman Empire, pp.33-84.
2. Vermaseren, 1963, p.90.
3. Ibid., p.92f; Marazov, 1977, p.37.
4. Vermaseren, 1963, p.92.
5. Ibid., p.94.

Mithra was associated with Sol the Invincible, the sun god, who communicated his commands to Mithra by means of his messenger, the raven.[1] Sol appears equally as an image in a chariot or as an equestrian figure. In the Balkans Sol is submissive to Mithra who is decidedly the dominant figure, but they remain amiable.[2]

(a) Man and Horse. The image of a man leading a horse or standing next to one occurs in the gold tiara plaque from the Karagodeuashkh tumulus (Fig. 115),[3] the silver fragments of the Merdjany rhyton[4] and in the two gold rings from Bulgaria (see Figs. 51, 52).[5] This class of horse and standing male figure is less common than that of the equestrian pose which is associated with a range of other forms, such as various animals, a tree, an altar, a chair or a throne.

One of the simpler equestrian poses is found on the left side of the helmet from the Agighiol tomb (Fig. 79a). This shows the figure of a horseman dressed in some sort of fitted garment, probably intended to represent scale

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1. Ibid., p.95f.
2. Ibid., p.96.
3. Rostovtzeff, 1922, p.104.
4. Tolstoy and Kondakov, 1899, Issue 2.
5. Venedikov, 1975, figs. 208-209.

armour, and holding a spear or javelin at his shoulder in readiness.

On one of the silver Letnitsa appliqué, which is only 5 cm in height and of irregular shape, a hunting scene is depicted in repoussé highlighted with gilding (Fig. 106). A horseman in a suit of armour is spearing a standing bear whose fur is indicated by large flame-like tufts. There is a ring about its neck. Another animal (wolf ?) is lying on its back, presumably dead, at the feet of the small stallion. The bridle with appliqué at the forehead is indicated. The horseman has reined in his horse which is bracing itself on its rear haunches. The hunter is wearing greaves which have the image of a human face at the knee. A gilded band, possibly intended as a torque, surrounds the neck. A flat ring on the back of the appliqué attached it to a strap.

This bearded rider, in a full suit of armour and "seated" on the small stallion, is a standard formula found on at least three other appliqués of the Letnitsa group. (Actually the rider is not exactly "mounted" on the horse; the image of the rider is merely placed over that of the horse, and their feet and hooves are almost at a common level.) One of these appliqués is nearly square and is framed in a pattern of ovulae.[1] Here

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1. See "Gold from the Grave", The Sunday Times Magazine, London, January 4, 1976, p.18.

the hunter also carries a spear as he rides his horse at a slow gait. The horse's head is carried low with ears flattened back. In the field behind the rider's head there is set a large, bearded head which is facing downward and has its mouth open. As in all human images on the Letnitsa appliqués the eye is disproportionately large and in front view. This convention of the large-scaled head which is totally unrelated to the scene is also found on coins of this period and from nearby regions, and may derive from such sources. On a stater of Asia Minor, minted (according to some) by the satrap Euagoras of Cyprus (351-349 B.C.) there is an image of the head of Heracles that serves as a magistrate's symbol.[1]

On another Letnitsa appliqué, rectangular in shape and similarly enframed, there is depicted a stallion and rider who is holding up a ribbed or fluted cup (Fig. 108). This could represent a deep-bowled phiale. In the field behind the rider's head there is a small animal, a dog with a curly tail. Vertical and horizontal patterns about the animal's head serve to emphasize it, and suggest a ruff. Ridges mark the ankles, as do lines of separation of some sort on all the animals represented, whether horse, wolf or bear. This is an aspect of the

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1. Richter, G.M.A., "Unpublished Gems in Various Collections", American Journal of Archaeology, 61, pp.263-268.

tendency towards isolating individual features.

(b) The Dog as Companion. The dog was an animal much appreciated by the Thraco-Getae as it was by the Scythians and Sarmatians.[1] Dog skeletons appear in Getae burials with men in the 4th century B.C. in both Bulgaria and Romania (Muntenia) as they did long before and after this period.[2] The dog was also held in highest regard in Persia; it was the only animal that the Magi, the priests of the Persian court, would not put to sacrificial use.[3] This taboo stands in accord with the dog's prominent position as companion to Mithra.

A more elaborate application of the horseman theme is included in the scene on the silver belt fragments from Lovets (Stara Zagora District) (Figs. 110 - 112).[4] The belt was an important piece of equipment for the warrior since ancient times and remained so in this region generally for centuries yet to come. The scene on the fragments has been separated into three panels which are framed in a dot-in-square pattern. In the centre panel the tree of life is represented by brief

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1. Bichir, G., "Manifestations de caractère magique et cultuel chez les Carpes", Dacia, N.S., 17, 1973, pp. 243-256.

2. Ibid.

3. Herodotus, Vol. I, I, 140, pp.179-181.

4. Bulletin de l'Institute archeologique bulgar, 8, 1930, p.18.

geometric pod-like forms. To either side a great boar moves forward, its front feet as if pouncing. The hind quarters appear stationary. A high ridge runs down its back and it has a curly tail. A spear has been thrown towards the boar on the right by a mounted horseman in the right-hand panel. His fingers are indicated by fine little lines; the hand is empty after releasing the weapon. The hunter's torso is turned in forward view and, as on the Letnitsa appliqués, the body is placed too low on the horse, but here the relationship in scale between horse and rider is more probable. A crested helmet is in the space directly under the horse. The rider on the left-hand scene carries a shield and a dog follows below the prancing horse. On the extreme right and left in each panel there is the figure of a kneeling archer with bow drawn and arrow in place. The exaggerated curving contour of the bow can only signify the composite bow, better seen on the example on the right. The archers wear small conical helmets, and appear, as does the rider on the right, to wear beards of appropriate Thracian fashion. The archers, who are the most skilfully worked of figures, are dressed in long fitted tunics. The vertical pattern below them may indicate the straps (pteruges) which were attached to the lower edge of the doublet worn as a protective garment (and possibly in place of lining) under the armour itself.[1]

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1. Robinson, 1975, p.149.

The scene owes much to Persian art, and even pre-Achaemenian art convention. The animals flanking the tree of life, which represents the principle of good, are an ancient convention from Mesopotamia which endured for millennia. A difference here is in the lack of a formal or heraldic pose. The boars are apparently advancing and their movement is linked to action carried out by other figures. In short, they are part of the scene and not isolated in an iconic expression. The archer type can be seen on a plaque from Luristan which is dated to the 9th-8th century, on a silver cup from Amlash, and on a small ivory plaque in the Ziwiya treasure.[1] On the ivory plaque an archer accompanies a horseman, and also wears a small conical hat and short tunic with vertical additions featured at the edge. While this work is primitively executed, the faithful restatement of detail reveals that the programme which it sought to emulate was well understood, if more freely interpreted.

(c) <u>The Bird as Messenger</u>. The horseman theme is found coupled with the image of the bird in several ways and on a variety of different kinds of religious or ceremonial articles. The bird, acting as a messenger, a source of inspiration or divine knowledge, is a constant theme in

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1. Venedikov, 1975, p.97.

Indo-European cultures.[1] In the Classical literature the raven is messenger of Apollo and in the Mithraic ritual it is associated with the Apollo-like sun god.[2] Sometimes the image occurs double in the heraldic mode, but it serves the same purpose. The bird acts as an intercessor bearing knowledge vitally linked to man's well-being,[3] and the element of foretelling the future is frequent.[4] The bird perched on the tree of life or the tree of knowledge is a visualization of this theme.

The theme of the bird associated with the rider was seen earlier expressed on the large silver rhyton from Arinberd which ends in the figure of a kneeling horse bearing a rider (see Fig. 38). On his small high domed hat, typical of the Armenian-Median costume, there is the engraved image of a bird seen from above with wings outstretched and head in profile.

On a silver phalera from Surcea in central Romania there is depicted a horse and rider (Fig. 123).[5]

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1. Vermaseren, 1963, p.95.
2. Ibid., p.70.
3. Ibid., p.95.
4. Ross, 1967, p.256f.
5. Fettich, N., "Archäologische Beiträge zur Geschichte der sarmatisch-dakischen Beziehungen", Acta Archaeologica Hungaricae, 3-4, 1953-54, pp.127-176. Also R. Florescu, Arta Dacilor, Bucharest, 1968.

Overhead there flies a large bird with hooked beak and outstretched wings. A small animal, most probably a dog, barking and with raised tail, moves in a direction counter to that of the prancing horse and rider.

On the Gundestrup cauldron interior plaque "E" there is a curious and complex scene which has been the subject of much debate among scholars for many years (Fig. 2). The subject without doubt concerns warriors, but what ceremony they perform is a disputed subject. In the upper right hand quadrant of the plaque there is to be seen a procession of men perhaps marching to battle. At the head of the column a mounted warrior wears a helmet with an animal crest, the image of a bird, mounted on top. Another warrior's helmet appears to have antlers, while an infantry man below carries a boar's image, and so on. An actual helmet with a bronze bird sculpture mounted on top has already been discussed (p. 177).

The bird in flight associated with the mounted horseman on these articles expresses the theme of the interdependency and interaction of these two images. As in all configurations the central components cannot be changed without altering the meaning, or invalidating it entirely.

(d) The Tree of Life. A still more complex association of horse and rider is found in the representation in which they stand in front of a tree of life, and on occasion, the serpent and bird - as well as other associated symbols - are also present.

In barrow 5 of the Pazyryk burials a large felt wall-hanging (?) was recovered and dated to the late 5th or early 4th century.[1] There is a configuration of a mounted warrior or hunter approaching a seated goddess figure. This motif is repeated six times over the entire surface which is 6.5 metres by 4.5 metres. The equestrian figure has short hair indicated in a scallop pattern, wears a chlamys, and carries the Scythian style gorytus, a combination of quiver and bow case. The goddess is seated on an elaborate throne and holds to her side a decoratively treated branch (? tree of life) in full bloom. The horse's forequarters are at rest and his rear quarters display a walking gait; the horse is just coming to a halt in front of the goddess.

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1. One hesitates to refer to this work of art as a wall-hanging in the light of recent research which strongly suggests that this textile could have been a windscreen used in conjunction with tents to form a temporary "courtyard" for an open air ceremony or ritual. See J.F. Haskins, "The Pazyryk Felt Screen and the Barbarian Captivity of Ts'ai Wên Chi", in The Bulletin of the Museum of Far Eastern Antiquities, 35, 1968, pp.140-160. Also see Rudenko, 1970, pp.289-290, pls. 149A and B, 154, 173.

Another example of the equestrian figure in confrontation with a tree is seen in the grave stele from Thrace (Fig. 11).[1] This god image, interpreted as Zeus Sabazios with a tri-pronged instrument (the thunder-bolt ?) in his right hand and two spears in his left, stands beside the tree. An eagle is perched in the branches and a serpent is entwined around the trunk. Beside the tree, which here is leafless, is an altar and near it a krater (the symbol for water). The horse, rearing back slightly, is raising a forefoot in a pose common to the heraldic mode. The scene is surmounted by a votive inscription. While the symbol of death is present in the leafless tree, the symbols for life renewal or resurrection are also present in the altar, water, and serpent winding its way up the tree trunk.

(e) The Horseman's Associations. The Thracian horseman image was combined with a variety of articles and animals that probably had different intentions. The horseman's role was assuredly that of a protector. Since the theme of immortality was well established in Thracian religion,[2] he must have had a connection with the translation of the soul of the believer to the world

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1. Cook, 1925, p.282.

2. Eliade, 1970, pp.31-80.

beyond, and the renewal of life. His depiction as a hunter is an allegorical statement akin, if not identical, to that of Mithra in his battle with evil and protection of the good.

One may now recall the Agighiol greave No. 1 with its image of the warrior or hunter with bow in hand symbolizing his kingly rank.[1] There the great descending serpent's head is poised, with tri-pronged tongue extended directly towards the horse and rider. According to Marazov this serpent symbolizes the divinity of the horseman.[2] The tri-pronged tongue of the descending serpent image is curious. It may have reference to the lotus which is at times just as summarily stated, and treated as a symbol of the life principle.[3]

On plaque "E" of the Gundestrup cauldron there is depicted a serpent directly in front of the column of warriors. On plaque "A" of the cauldron a ram-headed serpent is held in the hand of a seated deity figure (Fig. 4).[4]

The seated warrior figure on the same greave holds a bird high in his right hand, and a rhyton in his left.

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1. Marazov, 1977, p.40.
2. Ibid., p.41.
3. Dalton, 1926, p.119, fig. 35.
4. Ross, 1967, p.136; 153.

The bird has been interpreted as an eagle and as a symbol of royal power.[1] In this configuration the bird may have additional powers as well.

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1. Marazov, 1977, p.41.

CHAPTER V

JEWELLERY AND ORNAMENT

To date there has not been a great deal of jewellery recovered in the lands to the west of the Black Sea for the early part of the period under consideration. From the 5th century forward - i.e. during the Thraco-Getic period - there has been little found made of gold other than the Coţofenşti helmet, the Cucuteni-Băiceni Treasure, and imported Greek jewellery and coins. No examples of Celtic jewellery made of gold have been found, and Dacian jewellery was made of silver, judging by the evidence so far recovered from 52 sites.[1]

This conspicuous lack of gold objects among Dacian finds is difficult to explain since gold had been extracted from the soil of Transylvania since the Bronze Age (1900-1150 B.C.), and mining operations continued throughout the period of the Roman domination of Dacia.[2] Indeed, one of the causes of Rome's interest in this

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1. Horedt, K., "Die dakischen Silberfunde", Dacia, N.S., 17, 1973, pp.127-167, p.128. Until 1973 only 2 pieces of gold Dacian-made jewellery had been recovered, a 'spoon-fibula' at Remetea Marea and an object formed from sheet gold as a cluster of grapes at Mediaş. For a listing of Dacian treasure sites see L. Marghitan, Tezaure de Argint Dacice, catalogue, Muzeul de istorie al Republicii Socialiste Romania, Bucharest, 1976.

2. Maghiar, H. and S. Olteanu, Din Istorie Mineritului în România, Bucharest, 1970, Part II.

eastern territory was to gain control of the rich Dacian gold and silver mines.[1] As happened with Trajan's conquest of Dacia in 106 A.D. the gold mines were immediately confiscated, colonial labourers imported to work them, mining methods improved, and operations greatly accelerated, especially during the time of Marcus Aurelius (161-180).[2] A great arc of mining activities extended from Deva to Cluj: Băniţa, Ruda, Stănija (Hunedoara District); Roşi Montană, Baia de Arieş, Zlatna (Alba District); and northward to Boaişoara (Cluj District). Silver, iron, lead and salt were also mined, thus carrying the Roman mining activities still farther to the north to the Munţii Metalici, the Rodne Mountains (Bistriţa-Năsăud District).[3]

It is a well-established fact that alluvial gold was collected and reef gold mined in Transylvania in the centuries prior to the Roman conquest. Written evidence of the vast quantity of gold possessed by the Dacians at the time of Trajan's entry is found in the writing of the 4th century Byzantine historian Johannes Lydus.[4] His information was derived from a now lost

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1. Ibid.
2. Ibid.
3. Ibid., Part III, Ch. I.
4. Lydus, J. (John the Lydian), De Magistratibus, tr. T.F. Carney, Lawrence, Kansas, 1971, p.60.

work by Crito, Trajan's doctor, who stated that enormous booty in gold, twice as much in silver, and prisoners were sent back to Rome in celebration of victory over the Dacians. That his figures are greatly exaggerated is doubtless true, but that a large amount of booty was forwarded can readily be assumed. This would have been standard practice for the time, and that the Dacian gold mines did become the Imperial property of Rome is established fact.[1]

Nevertheless, the lack of any gold objects in grave goods dated to the years preceding the conquest remains curious. It has been hypothesized that during this period the last Dacian king, if not those before him, may have imposed a state monppoly on gold and its sources, placing them entirely in the control of a small leadership group.[2] If this had been the case, and the state gold was concentrated in a few locations or even a single one, this could account for its falling easily into the hands of the Romans. Obviously new archaeological finds may modify or overturn this theory in the future, but for the present the idea of a state monopoly of gold sources and treasure does account for the interruption in the continuous, if at times sporadic,

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1. Maghiar, 1970, Part III, Ch. I, Proprietorship of Mines. Maghiar states that the mines became Imperial property, the benefits realized going directly to the emperor.

2. Ibid., Part II.

evidence of local-made gold objects in this region.

Standard Greek export jewellery of the Thraco-Getic period, some of very fine quality, has been found especially in the coastal sites. The local-crafted articles - earrings, torques, bangles, chains, fibulae, beads and appliqués - are mainly of silver. The Cucuteni-Băiceni treasure, previously mentioned in the discussion on helmets, was of local manufacture and contained only objects made of gold. Two of the objects of that treasure, the appliqué and the spiral bracelet, will be discussed shortly since they represent two categories of metal objects which are typical for this region.

The third category of ornament to be examined is related in principle to the appliqué. This is the phalera, which was an ornament attached to horse trappings, and is generally conceded to have been an invention of the Iranians.[1] It is true that in literature these two terms, appliqué and phalera, are used interchangeably at times along with several terms that

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1. Horse trappings were decorated with metal parts as follows: a pair of ear guards, a frontlet or a headstall, temple pieces, pectoral, and appliqués which might be placed almost anywhere on straps, but usually at the intersection of two. There they functioned to control the position and tension of the straps. The Hittites and Assyrians were among the first to use such devices. See Rostovtzeff, 1922, p.130.

are rather too general, such as ornament, dress ornament, bracteate,[1] plaque and even button. In all cases the object described is a metal decoration which is attached to material either by means of sewing through perforations, or by use of loops or runners attached to the back of the piece. Since the term <u>phalera</u> is most commonly used for the roundels applied to horse trappings, the term here will be used exclusively for objects of this category. The term appliqué will be used to refer to a metal ornament which is applied to any article of flexible material by means of sewing or binding into place, and will also include the smaller ornaments on horse trappings.

All of these three categories - appliqué, <u>phalera</u> and spiral bracelet with animal <u>protomai</u> - had long histories before being carried into this region. All three were adapted to the local use of animal imagery. The Sarmatians used their peculiar animal style as well as mythological scenes and geometric patterns worked in repoussé.[2]

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1. See Glossary, s.v. bracteate.

2. Rostovtzeff, 1922, pp.136f.

APPLIQUÉS AND PHALERAE

The appliqué is a form of ornament used in Mesopotamia at least as early as the Jemdat Nasr period (late 4th millennium B.C.).[1] The original use for these little golden ornaments was for the decoration of the sacred vestments of the gods, and in later times in Assyria they were applied to the garments of the king, the vestis regia.[2] Evidence of appliqués used to enrich the surface of garments comes from several sources: references on tablets,[3] representations on bas-reliefs, glazed tiles, statuettes and large scale sculpture.[4]

Representations of gods and human beings in garments that are studded with rosettes or small gold ornaments appear as early as the 12th century B.C. in Assyria and Babylonia, and are maintained in Mesopotamian iconography until the Achaemenian period.[5] By the 9th century B.C. appliqués were placed on military clothing more frequently than on royal costumes.[6] In Babylonia gold appliqués had been reserved exclusively for cultic

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1. Tobler, A.J., Excavations at Tepe Gawra, II, University Museum, Philadelphia, 1950, pp.90-91, pls. LVIII, LIX.
2. Oppenheim, A.L., "The Golden Garments of the Gods", Journal of Near Eastern Studies, 8, 1949, pp.173-193; p.172.
3. Ibid., p.172f.
4. Ibid., pp.182-185, figs. 1-26.
5. Ibid., p.181.
6. Maxwell-Hyslop, 1971, p.255.

purposes, but by the time of Tiglath-Pileser III (745-717) it was the established fashion for kings. No secular use of appliqués on garments is indicated by the written or representational evidence.

By the Neo-Babylonian period tablets recording administrative activities of the temples make numerous references concerning the maintenance of the garments, listing the numbers and kinds of appliqués used.[1] Mention is made of the occasions when appliqués were taken off the garments for repair and cleaning, and the amount of gold given to the goldsmith for the task.[2] From such information the arrangements of patterns are sometimes inferred.

The appliqué was a means of enriching the surface of textiles before complex weaving methods had been invented. Their use on the sacred and royal garments continued for centuries establishing a type of decoration that was later imitated in woven textiles. These basic patterns and some of the same motifs, principally the rosette, continued into the Sasanian period.[3]

Before continuing to trace the use of the appliqué, a related form should be mentioned: the pectoral,

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1. Oppenheim, 1949, p.172f.
2. Ibid., p.174.
3. Ibid., p.191.

This form sometimes has the features of an appliqué (in that it is sewn on), but it is sometimes pinned on by means of fibulae, and at other times it is an independent piece of jewellery suspended by a chain about the neck. The pectoral, which is frequently a crescent shape with rounded ends, was used in close association with appliqués applied very densely to material or leather. This is seen in a relief from Kunyunjik depicting Ashurbanipal (668-626) in the act of hunting.[1] His chest is shown covered with a rectilinear arrangement of metal parts forming a flexible type of armour. The pectoral continued to be used, being produced as a single piece of metal usually worked in repoussé. Numerous examples have been found produced in Thrace datable to the late 6th-5th century when they were in use among Thracian nobles, both male and female (Fig. 113). None so far have been recovered in Romania.

North Syria has yielded a fair amount of evidence of the use of appliqués in the 8th-7th century B.C.[2] From Ziwiya in Iran appliqués have been found in many shapes: lotus flowers, Maltese crosses, rosettes and stars of different kinds, even animal images such as the ibex couchant.[3] A few more ambitious examples,

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1. See British Museum Inv. No. 124875.

2. Maxwell-Hyslop, 1971, pp.211-213.

3. Ibid., pls. 178, 179.

which were not intended to be used to develop all over patterns were shaped as lion heads, ajouré and in silhouette, and were presumably sewn on to clothing worn by the statues of gods and goddesses or by kings. Their purpose is believed to have been apotropaic.[1]

The Rosette

The rosette was a favourite motif produced in the applique form. As the divine symbol of Inanna and later of Akkadian Ishtar, the rosette begins to occur in the cylinder seals of the late 4th millennium B.C. at the Sumerian site of Uruk in southern Iraq.[2] The use of the appliqué in the form of a rosette, and also a star pattern to which it is closely related, spans an extraordinary period of time.[3] As Maxwell-Hyslop has observed, it could, like so many other Mesopotamian symbolic motifs, have been used for ornamental purposes, but the magical function of the symbol was the main reason for its widespread use in early Sumerian art.[4]

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1. Maxwell-Hyslop, 1971, p.211.

2. Van Buren, E.D., "The Rosette in Mesopotamian Art", Zeitschrift fur Assyriologie und Vorderasiatische Archaologie, 11 (45), 1939, pp.99-107. For drawings see Van Buren, 1945, p.84 and p.190, figs. E5a, E5b.

3. Ibid.

4. Maxwell-Hyslop, 1971, p.211.

The rosette continued as a divine symbol, surviving the changes in name and importance undergone by different Sumerian deities when worshipped by Semitic Akkadians, Amorite Babylonians, Indo-European Kassites or Assyrians in the 1st millenium B.C.[1]

As a form of appliqué placed on garments and prominent as an attachment on headdresses reserved for divine beings and kings, it remained in use in Western Asia and the Near East for centuries, and later was employed by the Greeks in a modified form. Examples used in male jewellery are found in the two headdress appliqués recovered at Ur and assigned to c.2500 B.C.[2] They both are made of gold (the cloisonné inlay is now missing) and one in the form of a double rosette. A rosette worked in 7th century Greek style, combined with human and animal heads superimposed, is found in a six-petalled variety of gold and with fine granulation.[3] A runner on the back indicates that it was used on a headband.

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1. Ibid., p.152.
2. Woolley, 1934, p.167.
3. Marshall, F.H., Catalogue of Jewellery, Greek, Etruscan, and Roman, in the Department of Antiquities, British Museum, 1911, No. 1230, pl. XIV.

Summary of Characteristics

The appliqués mentioned have been by and large of two different types. A large category is formed of small decorative units used in fair numbers in order to develop all-over patterns and borders. A second type is the larger roundel on which a design, usually concentric, is contained, worked in repoussé or by chasing. These two basic types continue, a decorative form expressed by outline and the roundel containing imagery.

Some outstanding examples of roundels are worked in highly compact design motifs and in fine detail. Such examples exceed ornament and should rightly be considered as a piece of jewellery despite their stationary placement. A 7th century example found in the village of Ghafantlu, five miles from Ziwiya, is a roundel (7 cm) of gold with granulation. In the centre there is depicted a striding bearded figure holding two lions by the leg, the 'Gilgamesh' roundel (Fig. 114).[1] The figure is shown wearing a tunic apparently of patterned material, showing circles inside squares which in all probability describes appliqués.

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1. Culican, W., The Medes and Persians, London, 1965, pl. 18; The Nelson Gallery - Atkins Museum Bulletin, Spring, 1961.

The gold plaque of the Karagodeuashkh tiara (Fig. 115) was previously discussed in connection with the rhyton. However, it should be recalled as an appliqué of an unusual kind decorating a ritual tiara.

The Thracian World

During the Late Bronze Age (c. 1550-1500 B.C.) appliqués were in common use in the Thracian world. They have been found in hoards left by the local cultures in different parts of Romanian territories: at Smig, Tufalau, and Pecica in Transylvania and Ostrovul Mare and Tiganasi on the Danube. In the treasure of Smig (Sibiu District) dated to the Middle Bronze Age (c. 1600-1300) 26 gold appliqués were found along with other gold objects.[1] The hoard from Tufalau contained, among other things, eight appliqués richly ornamented along with a quantity of unworked gold.[2] The hoard at Ostrovul Mare (Mehedinţi District) contained 33 gold appliqués, all roundels, in a collection of 50 objects.[3] All of these 33 appliqués share two common design motifs

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1. Popescu, D., Die frühe und mittlere Bronzezeit in Siebenbürgen, Bucharest, 1944, p.131.

2. Berciu, D., Romania, London, 1967, pp.100-101.

3. Popescu D. and V., "Asupra tezaurului de aur de la Ostrovul Mare", Studii si Cercetari de Istorie Veche, IV, 3-4, 1955, pp.865-880.

composed essentially of the 'C' scroll and the running spiral. Berciu draws attention to Mycenaean influence in this region as shown in the decoration of these appliqués as well as other objects.[1]

The appliqués in use at Mycenae during this same period (c. 1550-1500 B.C.) were of many kinds: cut into animal shapes, natural and imaginary, as well as flower shapes, shrines, and human figures (goddesses?) sometimes combined with images of birds.[2] More common are the discs with chased designs, some of which were carefully executed with a compass. It is this kind which are similar to those found in Romanian territories.

By the 5th-4th century period the appliqué and phalera were still in use among the Persians and the Scythians. As for appliqués used on clothing, the roundel continued in fashion. Five gold appliqués were found among the objects of the Treasure of the Oxus (5th-4th century); one example in openwork, three roundels in repoussé (two animal heads, one human head) and one appliqué in the form of a stylized bird's head terminating in an 'S'-curved serpent body.[3]

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1. Berciu, 1967, pp.100-101.

2. Karo, G., Die Schachtgräber von Mykenai, Munich, 1930, p.190. Karo thought these appliqués were only for funerary purposes.

3. Dalton, 1964, pp.89-92, pls. XI, XII.

In Thrace very similar roundels in silver have been found, one of a gorgon and one of a lion head in frontal view.[1] The phalera must have been an ornament very much in use in this sphere judging from the number of examples found both in Thracian and Getic lands. These are executed largely, though not exclusively, in silver. Some are gilded, and most have animal motifs. No new forms were devised; the small decorative unit, the rosette, the animal-head shape, the roundel and the rectilinear shape all continued to be produced. However, the division of the surface space and the resulting outline of the shape of the piece is now somewhat more complex. The old Assyrian form of two animals as mirror images sharing a common baseline is found.[2] Concentric patterns spin off from a centre boss, either whole animal bodies or only animal heads. These are shown in profile forming tri-part or swastika-type designs. Some are treated as openwork patterns.

Craiova 'Treasure'

A large collection of silver ornaments for horse trappings was found in 1917 near Craiova in Oltenia;

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1. Venedikov, 1975, figs. 226 and 227.
2. This format is found in use in gold relief appliqués from the shaft graves at Mycenae, c.1550-1500 B.C. See S. Hood, The Arts in Prehistoric Greece, Harmondsworth, 1978, p.203, fig. 203 a-c. The form appears also in Thracian appliqués, see Venedikov, fig. 278.

the exact location and type of burial is unknown (Figs. 116-122).[1] Since this group of objects was referred to in the early literature as a 'treasure' the use of this word has remained, even though the contents do not suggest a treasure or collection as much as an inventory of trade goods.[2] The 'treasure', which was originally reputed to have been composed of 80 pieces, now contains approximately 60, and is one of the most important discoveries of this period made in Romania. The treasure is dated to the second half of the 4th century, and characterizes the Thraco-Getic animal style.

The design formats are not original to the region, which accounts for the treasure being referred to in early literature as 'typically Scythian'.[3] The stylization and the manner of execution - which is the concern of this study rather than the origin or route of diffusion of design - remain consistent with other Thraco-Getic material. The Craiova 'treasure', like some very similar Bulgarian appliqués, is typical of the Thraco-Getic vision of abbreviation and compaction of features

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1. Berciu, 1969, pp.123-146.

2. Ibid., p.123. Berciu has made reference to the first article published about the Craiova 'treasure' by H. Schmidt, "Skythischer Pferdegeschcrrschmuck aus einem Silberdepot unbekannter Herkunft", Prähistorischer Zeitschrift, 18, 1927, pp.1-90.

3. Borovka, 1928, pp.50-51.

which are made yet more abstract and geometric than their parent forms. In this case these are Scythian or Achaemenian. The repertoire of techniques is limited but the use of line and silhouette, so thoroughly exploited in the animal style generally, is well demonstrated in the appliqués as a group. Some of the standard Thraco-Getic conventions employed to emphasize forms, especially the cross-hatched line and spiral, have been used to good effect to carry a pleasant, rolling rhythm throughout some of the design patterns. This is well developed particularly in the tri-part and swastika-type appliqués (Figs. 116-118).

In the group of single-animal (or animal part) appliqués the silver and gold stag head (?)[1] appliqué of the Craiova 'treasure' provides an interesting example of the relationship between the two and three-dimensional expression (Fig. 119). The appliqué, 6 cm in length, is made from sheet silver with a flat ring soldered to the back. A gold foil has been superimposed on the three curving volutes (which are interpreted as representing the antlers) as well as on the eye, the nostril, and the lower cross-hatched border. The eye is seen in front view and the ear is sketched to reveal the

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1. Berciu considers this image to be a stag, and Venedikov has interpreted it as a bull seen in full profile which is incorrect (Venedikov, 1975, fig. 296).

interior. A circle-and-dot border traces the exterior and the area underneath the eye. This same impulse to trace dots to emphasize form or feature, first seen on the Agighiol helmet, is also found on other objects of the Craiova 'treasure', such as the cast silver bull heads (some of which are gilded) (Fig. 120).[1] Lines of small holes trail down the muzzle-ridge and across the cheeks, and a line runs transversely across the end of the muzzle above the nostrils. Since none of the examples are duplicates, it is presumed that they were made by means of the cire perdue method, which was then followed by some chasing. On some a suspension loop was cast in place of the underside, and on others separate carriers, now lost, were soldered into place. Some simply have holes in the side of the head for placement of straps.

Other features of these little cast heads have parallels in the Poroina rhyton. In examining the under aspect of both the bull heads and the rhyton one discovers the same geometricized mass. The head is a triangular wedge with the tip of the muzzle treated as a bulbous, almost spherical mass.[2] A rosette pattern has been placed on the forehead of the cast bull heads and

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1. Berciu, 1969, pp.134f, fig. 99.

2. Ibid., and also see underview of the Poroina rhyton, fig. 109.

one is seen on the rhyton. Crescent lines stand for nostril openings on the cast heads; the crescents are joined into a single line on the rhyton.

The tri-part and swastika-type appliqués (Figs. 116-118) all demonstrate the Thraco-Getic feature of the cross-hatched lines. This cross-hatched feature is also present on the appliqué of the 5th century Cucuteni-Baiceni treasure which is also of swastika-type pattern and is made of sheet gold. On those of the Craiova 'treasure' the lower lip of the animal (probably horse) heads of Fig. 116 and Fig. 118 resolves into a spiral, a typical means of terminating a curving line used repeatedly within this group of subjects. On the appliqués in Figs. 121 and 122, which have been interpreted as depicting the hindquarters of a quadruped (they are not fighting animals)[1] this curved line-to-spiral theme is repeated, often running counter to the verticality of the upright form itself. In Figs. 121 and 122 a predatory bird's head has been superimposed and fitted into the rump area of the hind leg, and in Fig. 122 little bird heads have been set in place of hooves. Other appliqués are variations of this theme.

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1. This is a perpetuation of Schmidt's mistake. See E.H. Minns, 1942, p.22 for his discussion of the derivation of this design.

Letnitsa Appliqués

Some of the Letnitsa appliqués (commonly designated as phalera and plaques) have been discussed relative to the theme of the Thracian horseman (p.214 and Figs. 103, 106-109. However, the group should be recalled here in order to place them within their appropriate category of forms. As a group the Letnitsa appliqués depict scenes filled with human and animal figures, worked in deep repoussé with some gilding to emphasize details.

The general type of appliqué and quality of work is similar to the silver belt appliqués found in barrow 2 at Pazyryk which is dated approximately to the last quarter of the 5th century B.C.[1] One appliqué was found still attached to the embroidered strap belt on which small appliqués of gold foil were also sewn. The second appliqué was found separately, but since it is identical - though mirror images are employed - it is presumed to have been attached to the same belt.[2] The appliqués of cast silver, 4.3 x 4.6 cm, were later stamped and are perforated for attachment. The scene is of a seated ibex with one paw upraised, superimposed on the image of an open-mouthed, rearing lion. Their

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1. Rudenko, 1970, figs. 67 A and B. Barrow 2 is among the earliest of all the barrows which span about 50 years or three generations. A mean date of 430 B.C. is used for the whole group, but Barrow 2 has an actual reading of 390 B.C. (p.xxix).
2. Ibid., p.99.

bodies face in opposite directions but they are turned to confront each other. Besides bearing the usual commas and half horseshoe-shaped markings, their bodies are outlined in very fine lines (visible under a magnifying glass) which are presumed to imitate the stitches used in appliqué work done on soft goods.[1] This kind of technique is found at Pazyryk in the felt and leather work which is covered with appliquéd images superimposed on the surfaces of the saddle pads, bags and pouches used in such abundance by a nomadic people. On the neck of the ibex there is once again to be seen the convention of the parallel columns of little dash marks to indicate the hide of the animal. The plaque is enframed in a pattern of little circles with tangential lines spinning off on opposite sides to create a simple circle-line motif.

The Dacian Phalera

The phalera was in use during the Dacian period, i.e. 1st century B.C. - 1st century A.D. One of the phalerae of the Surcea find has already been mentioned in connection with the Celtic helmet on which a sculpture of a bird was mounted (Fig. 123). The find, discovered in 1934, contains six silver phalerae, six

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1. Ibid., p.100.

iron anvils and a shapeless rod of silver.[1] The nature of this collection of objects, and the fact that it was discovered in a shallow site in total isolation without a skeleton or any other material, has led to the assumption that it was the possession, hastily concealed, of a silversmith.[2] Since evidence of Dacian silver workshops was not firmly established until quite recent years, it was earlier presumed by some scholars, including Fettich, that the source of the goods was to be found eastward, presumably at Olbia. Fettich's arguments were based partially on technical analysis, which was incidentally incorrect,[3] and on the fact that the Dacians were a sedentary people. Hence any use of *phalerae* would necessarily have been an adaptation. It is true that there is evidence of the *phalera* having been converted in the examples of the *fibula-phalera* found at Herastrau,[4] but Fettich was mistaken in his assumption that the source of manufacture must necessarily have been found to the east.

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1. Fettich, 1953-54, pp.127-176.
2. *Ibid.*, p.129.
3. Fettich speaks of the characteristic lemon-yellow colour of the gilding. It would be quite impossible to determine the source of gold (which Fettich is suggesting) on gilt objects by means of visual comparison. See p.260 on the Multispiral 'Bracelet'.
4. Popescu, D., "Objets de parure geto-daces en argent", *Dacia*, 7-8, 1937-40, p.199.

Since the time of his writing in 1952 an abundance of evidence of Dacian silverworking studios has come to light at numerous sites.[1] All are located within the precincts of the fortified cities, the Dacian davas which were similar to the Celtic oppida and served the same purposes. Evidence of the working of various metals such as iron, bronze and silver, for the manufacture of tools, arms, armour and silver objects has been found at several of these fortified cities.[2] Dacian silverworking studios have been discovered at Ardeu, Grădiştea Muncelului and Băniţa (Hunedoara District), Tilişca (Sibiu District), Piatra Craivii (Alba District), and Popeşti (Ilfov District) among others.[3] At Pecica (Arad District) the most substantial evidence of metalworking so far discovered has been found, including evidence that Pecica functioned as a Dacian mint.[4]

Once the availability of technical means has been established, the Surcea material can be considered on the basis of iconography and manner of execution. The theme of the Thracian horseman was introduced previously

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1. Crişan, 1977, pp.292-317.
2. Ibid., Ch. VII, pp.290-381.
3. Ibid.
4. Ibid., p.306.

and need not be dealt with here (p.214). As for the style, manner of execution and technical means demonstrated by the phalera, there is nothing against considering this to be a probable Dacian product. This much-worn phalera was repaired in antiquity by means of two rivets, the heads of which can be seen interrupting the surface of the phalera and covering part of the imagery.

By the 1st century B.C. the Sarmatians had settled as far west as the Dniester River, and with the collapse of Burebista's state at his death in 44 B.C., they pressed farther westward into Moldavia, and south at least as far as Tomis.[1] Their advance is well marked by a decided change seen in burial method and goods. One aspect of this change is recorded in the increased frequency and numbers of phalerae found. One such, a silver phalera from the North Pontic area and assigned to the 2nd century B.C., is a typical example of Sarmatian animal style (Fig. 124).[2] Their animal figures were accomplished in an energetic manner, if clumsy and large-headed and the bodies were treated

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1. Ibid., p.260.

2. Rostovtzeff, 1922, p.136, pl. XXVII. Concerning the question of origin and Sarmatian trade in Transcaucasia, see M. Rostovtzeff, "Les antiquités sarmates et les antiquités indo-scythes", Recueil d'études dedicees a la memoire de N.P. Kondakov, Prague, 1926, pp.257-258, and Harmatta (1970), pp.34-40.

decoratively. The more influential aspect of their metalwork, however, was their use of set stones - turquoise, lapis lazuli, cornelian and coral - the polychrome style (see Appendix III - The Sarmatian Contribution).

THE MULTISPIRAL 'BRACELET'

The large multispiral 'bracelet' has been cited as the most characteristic form of Dacian metalwork since it is one which has so far only been found in Dacian territory (Figs. 125-133).[1]

Evidence for the basic principle of a bracelet formed of a long rod which makes several turns is ancient. Examples are found even in the early Bronze Age (early Helladic II c. 2500-2200) such as the one from the island of Levkas.[2] Gold torques datable to the Middle Bronze Age (c. 1200-900 B.C.) have been found in Britain, Ireland and France.[3] A twisted, multispiral

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1. Popescu, D., "The Art of Metal-work in Pre-Roman Dacia", Treasures from Romania (catalogue) British Museum, 1971, pp.35-47; see p.45.

2. Hood, 1978, p.93, no. 189f.

3. Eogan, G., "The Later Bronze Age in Ireland in the light of recent research", Proceedings of the Prehistoric Society, N.S., 30, 1964, pp.268-351; see pp.277-283.

bracelet of gold with goat head protomes is among the objects of the Treasure of the Oxus (5th-4th century B.C.).[1] It has been suggested that this bracelet may have been rewound in modern times, and that it should be a single hoop worn about the neck,[2] but this seems improbable both on aesthetic and practical grounds. As it presently stands, wound three and one half turns (with a diameter of 8.6 cm and thus a length of about 95 cm), it would form an awkward torque for it would apparently have needed to be wound twice.

A gold bracelet, coiled into two and a half turns, was found in the unpublished 5th century treasure from Cucuteni-Băiceni (Fig. 135). With a diameter of only 3.5 cm (or a length of about 27 cm) it was probably originally turned as a single hoop. The protomes are difficult to identify with a particular animal. Each head has a 'collar' formed of gold wire in a meander pattern and a rosette placed at the forehead. This is separately formulated, as are the ears. A corrugated projection runs down each cheek to the muzzle. It suggests an exaggerated jaw fringe as seen in the Achaemenian ibex protome,[3] or it may be intended as

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1. Dalton, 1964, pp.108-115, pl. XVII, no. 138.

2. Jewellery through 7000 Years, catalogue, British Museum, 1976, p.88.

3. Maxwell-Hyslop, 1971, p.214, fig. 120.

ram's horns.

Examples of Sarmatian multispiral bracelets are numerous, frequently made of gold, and terminating in the protome of various animals.[1] The elk with drooping muzzle can be recognized without doubt, but at other times the form is too stylized for certain identification.[2] Gold torques from the 3rd century grave at Prokhorovka terminate in a dragon head with a ridge running down the head and neck.[3] These dragon heads bear a resemblance to the carnyx-type dragon head (Fig. 105). Borovka cites two examples of gold armlets composed of several coils (one has about 11 turnings) which he assigned tentatively to the Hellenistic age.[4] These represent old find material apparently as he indicates they were in the collection of Peter the Great and came from Siberia. Close parallels to this type were also recovered from the Volga district in South Russia.[5] These multispiral 'bracelets' produced eastward were carried into the Pontic region by the

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1. Sulimirski, 1970, pls. 23-26.
2. Rostovtzeff, 1929, pl. XIV, figs. 4-5.
3. Rostovtzeff, 1922, p.124, pl. XXIV, figs. 2-3.
4. Borovka, 1928, p.69, pl. 57b and c.
5. Ibid.

Sarmatians.[1] Among the examples from the Middle Sarmatian period (or the end of the 2nd century B.C. to the mid-1st century A.D.) - namely figs. 23 and 26 cited by Sulimirski - are the most stylized with the features strongly geometricized. In all probability these later examples stand as predecessors to the Dacian multispiral 'bracelet'.

The uniqueness of the Dacian 'bracelet' lies partially in its enormous scale. It has five or six spirals with an average diameter of about 12 cm. Because of these proportions the obvious question is whether a woman could ever have worn such a large object. Părvan questioned if it could have been worn on the leg at the calf.[2]

Unfortunately most of the examples of Dacian multispiral forms have been found accidentally, not through excavation, and thus not a great deal of data accompany them. No gradual development towards these forms has so far been discovered on Romanian territory. One primitive version has been found, but this is apparently contemporary with more developed types (Fig. 133).[3] Nor

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1. Sulimirski, 1970, pls. 23-26.
2. Părvan, V., Getica, Bucharest, 1926, p.548.
3. Marghitan, 1976, pp.33-34.

has any direct progeny of this form come to light to reveal continued use of the form past the apogee of the Dacian era. Dacian forms did continue to be produced to some extent into the 2nd century A.D. (after the Roman conquest) before disappearing entirely.[1] Of all the Dacian finds to date, whether they were treasure assemblages (52), isolated finds (32), settlement finds (11), grave goods (4), or in unknown condition (12),[2] the great bulk has been limited to the known Dacian territory itself, and comes mostly from the southern area between the Carpathians, and the Mureş River and its great twin tributary, the Tirnava River.[3]

In a recent study the typology of the multispiral form was established by analysis of all the extant examples which are housed within the national museums in Romania, Hungary, Austria, and Yugoslavia.[4] The

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1. Fettich, 1953-54, p.127.

2. Horedt, 1973, p.130.

3. Ibid.

4. Medelet, F., "Brăţările spiralice Dacice de argint", in In Memoriam Constantini Daicoviciu, Cluj, 1974, pp.229-240. Medelet has written his study on the basis of having examined all the multispiral forms that have been deposited in the Kunsthistorisches Museum, Natural Science Museum (both in Vienna); The Hungarian National Museum, Budapest; The National Museum, Belgrad; and The National Museum of Romania, Bucharest. See his bibliography on the subject on p.229.

criterion for dividing the examples into five groups (A-E) was based on the technique of establishing the leaf pattern. The first four were named after the best material recovered there: (A) Orăştie (Figs. 125 R; 127):[1] leaf image stamped, followed by chasing of details; (B) Ghelinţa (Fig. 129):[2] leaf image stamped only; (C) Coada Malului (Fig. 131):[3] leaf image created by chasing, after only the ovoid field of the leaf-shape was stamped; (D) Cerbal:[4] protome of animal set in front of a widened section which was not decorated; (E) spiral bracelets with protomes most of which are schematic. The undecorated spiral also lacks a widened section.[5]

Medelet has presumed that the stamp was struck directly on to the silver bar,[6] and Fettich[7] has interpreted the exterior edge or rim of some of these leaf images as having been 'upset'[8] or shaped by forging

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1. Sacken, E. and F. Kenner, Die Sammlungen des K.K. Münz-und Antiken-cabinetes, 1866, p.334, No. 35.

2. Popescu, 1937-40, p.201.

3. Popescu, D., Studii şi referate privind Istoria României, I, 1954, pp.91-104.

4. Fettich, 1953-54, pp.127-176.

5. Medelet, 1974, p.233.

6. Ibid., p.232.

7. Fettich, 1953-54, pp.127-176.

8. See Glossary, s.v. upsetting.

technique. Though no metallographic analysis is available yet,[1] some visual analysis is still in order. Considering the level of technical skill of Dacian metalwork generally, it appears safer, considering this lack of analytic data, to return to Părvan's earlier suggestion that wax was the material on which the impression was made.[2] It would follow that the edges, which exhibit wide variation in treatment, would in some cases have been reduced simply by pressing the wax into place and smoothing the surface with perhaps a wooden tool, the wax matrix then being prepared for casting. Fettich's interpretation that the upsetting was done on these exterior edges implies unnecessary complexities which are in no way manifest in Dacian metalwork. On the contrary there is generally a notable lack of application of the upsetting technique or any rim- or edge-thickening technique such as caulking.

That stamps were used as a means of decorating ceramics at this time is well established, and this fact has been associated with this use of the stamp on the multispiral form in several instances. Among the examples that could be cited[3] there is one which has

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1. Medelet, 1974, p.237.

2. Părvan, 1926, pp.547-549.

3. The author has studied those multispiral forms which are in the Kunsthistorisches Museum and The National Museum of Romania.

been decorated by means of a stamp of outstanding technical quality - the spiral form from Senereuş (Fig. 132).[1] The perfection of the controlled planes of the lines created by the application of this stamp to the matrix (most likely wax) indicates the use of a metal stamp. This pattern, which happens to be of geometric character, stands in strong contrast to the fluid contours of the edge of this terminal part. The soft and easy line has a modelled quality, and does not exhibit the disciplined tautness of a surface developed or 'pulled' by hammer strokes.

It is unlikely that the hot forging technique was applied either to the terminal portion or to the spiral itself. There is effectively no mechanical advantage in forging silver hot. Silver heated to a red glowing condition (comparable to the condition of ferrous metal heated to forging temperature) is in a fragile condition, and must be handled with great caution.[2]

A final point should be mentioned before leaving the matter of techniques, and that is the question of the gilding exhibited on some of the multispiral forms. This factor has been cited as evidence which could be used to identify the source of manufacture.[3] Several

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1. Marghitan, 1976, p.46.

2. W.A. Oddy (Principal Scientific Officer, Research Laboratory, The British Museum) forwarded this information in correspondence).

3. Fettich, 1953-54. The author cites the gilding colour as a means of establishing the location of manufacture of a number of Dacian metal objects and suggests Olbia as the likely site.

factors affect the colour of gilding: the thickness of the layer, the fineness of the gold used, the technique of application, the state of preservation, and the effect of any deliberate chemical colouring process.[1] However, only the last factor is likely to result in a trait which could be attributed to a particular workshop. In other words, it is impossible to use the colour of gilding as a diagnostic means of identifying the source of manufacture.

Manner of Treatment

These protomes consistently exhibit an overall pattern of basically triangular shape followed by a rectangular zone variously decorated but with a consistent pronounced longitudinal ridge distinguishing the edge. This part is immediately followed by six- or seven-leaf images. The terminal section has been so developed that it tapers as it joins the spiral itself. The impression of a gradation in the size of the leaf image, and hence in the stamp itself, has been created by a gradual reduction of the field surrounding the imprint. In one example, however, a second stamp of a smaller size was actually employed.[2]

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1. See Note 2, p.260.
2. Medelet, 1974, p.232, cites an example he found in the collection in The National Museum in Belgrad.

The protome appears to be a geometric abstraction of a serpent head in most cases, with the specimen from the Feldioara Treasure being an outstanding exception (Figs. 125 L; 126). There the snout actually broadens and the surface of this flattened tip is rectangular in cross-section.[1] The rectangular section which follows the protome tends to be proportionally about twice as long as it is wide, or even longer. It is a substantial feature and one which carries a good deal of the visual weight of the terminal piece as a whole; with the protome, it stands in counterpoise to the leaf images. In short, it strongly supports the protome which is diminutive in comparison and is never really separable from it; they are to be read as a compound unit.

The treatments of this rectangular zone are diverse. They include a median line from which chevron lines descend (ex. Carpiniş, Fig. 128);[2] division of this zone by four equally distant superimposed ridges (ex. Ghelinţa, Fig. 129); little lines stacked in parallel rows (ex. Dupuş, Fig. 130);[3] or the same design but with the little lines curved and the rows altered to produce a

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1. Amandry, 1953, pls. XXI, XXII for examples of protomes on silver bracelets (single hoop) which are similar. See No. 116/117 in top-view. Provenance 'Chalcidique'.

2. Fettich, 1953-54, p.157.

3. Ibid.

wavy pattern (ex. Orăştie, Figs. 125 R; 127). These decorative expressions tend to produce not a sense of form or image so much as a texture which dominates the centre of the rectangular zone. Visually this tends to support the natural and swift movement of the eye from the protome towards the leaf images.

One feature of this zone, however, is absolutely steady: the pronounced outside ridge which runs the length of the rectangular zone. The most common treatment of this ridge is by means of fairly densely spaced lines forming a chevron pattern with a median line, producing only incidentally what can be called the look of a feather image (examples: Carpinis (Fig. 128); Orăştie, Feldioara (Figs. 125 L; 126);[1] Coada Malului, Senereuş. The example from Dupuş (Fig. 130) has simple diagonals, and that from Ghelinţa has lines which appear to form little crosses.

In summary, the most elaborate example which has been cited is that from Orăştie. The least developed example is that from Herăstrău which lacks stamped decoration (Fig. 133). The snub-nose turns up very slightly at the end, as on the Feldioara example, and bears an affinity to the Dacian torque from Marca (Fig. 134).[2] There

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1. Sacken, 1866, p.334, No. 31.

2. Seidl, J.G., Chronik der archäölogischen Funde in der Österreichischen Monarchie, Bd. 1: 1840-1845, (Vienna 1846), p.28.

the strong curve of the edge ridge is described and emphasized with diagonal lines on what has been determined as a dragon head.

Cultic Significance

Medelet has noted that these multispiral forms, of which there are about 30 examples (broken fragments make an exact total difficult to establish), are all made of silver, never bronze.[1] Though the decorations were produced by various means, all express a single basic form. The different means by which they were manufactured produced the same general look, and this together with the scattered locations of discovery sites throughout Dacian territory, suggests that this is a traditional piece which must have been produced in many different Dacian workshops,[2] not imported from Olbia and not made within a brief period of time within a single workshop. He also observes that the number of leaf images, though revealing a range of variations, are constant in being either six or seven in number, and cites Daicoviciu's study which demonstrates the significance of the numbers

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1. Medelet, 1974, p.239.

2. Ibid., pp.238-239.

in Dacian religions.[1]

Ultimately Medelet arrives at the interpretation, which I share, that there multispiral forms have a cultic significance for a priestly cast such as the Druids of the Celts.[2] Despite the paucity of supporting evidence, literary or otherwise, as to the precise nature of the Dacian religion, sufficient evidence exists to pursue some themes which are generally accepted today by Romanian scholars.

Dacian Religion

In the past the opinion of Romanian scholars as to the nature of the Daco-Getic religion has varied. Three different opinions have been put forward at different times: that the basic principle was monotheism, dualism or polytheism.[3] Today the overwhelming majority of scholars espouse the point of view that the Daco-Getic religion was polytheistic.

The principal god was Zamolxis (Salmoxis, Salmoxis) who has been compared to Orpheus in that he too promised

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1. Daicoviciu, H., Dacia de la Burebista la Cucerirea Romană, Cluj, 1972, pp.204-266.

2. Medelet, 1974, p.239.

3. Crișan, 1977, pp.447-448.

immortality to his followers. The neophyte was prepared for his new way of life by participation in a ritual symbolizing death, rebirth and resurrection. According to Eliade the crucial omission made by early Greek writers reporting on Getic and Dacian religious matters was their lack of appreciation for the shamanic practices which were a central aspect of the religious system.[1] It was these shamanic practices, common to all Thracian peoples, and not the doctrine of the cult of Zamolxis, which assured the newly initiated of an afterlife in paradise.

Significant modifications occurred between the time Herodotus and that of Strabo four centuries later. By the later period, possibly as a result of Celtic influence, the priest class had accumulated sufficient prestige to be considered representatives of Zamolxis, and act as advisors to the king.[2] Also by this later period (the 2nd-1st centuries B.C. and later), the cult of Zamolxis has acquired interests in medicine, astronomy, mysticism and magic which were general to the eastern Mediterranean world and the syncretism of the Greco-oriental cults of this period.[3]

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1. Ibid., p.451.
2. Ibid., p.452.
3. Ibid.

The Dacian Dragon/Serpent

The Dacian dragon/serpent concept is a continuation from at least the first half of the 4th century as is evidenced by the Vratsa and Agighiol greaves. There, different natures of this compound creature are found. On the Vratsa greave, ferocious lion-serpents charge down each side of the neck region, dragon/serpents descend from coils, and docile examples hang limply from the talons of the bird images; on the Agighiol greave no. 1 a benign serpent lowers its head to confront the mounted warrior and another confronts a bird image; on greave no. 2 serpents' heads move past the bird images. The dragon/serpent image does not appear, even at this early period, to be evolving along a single course. For that reason it may be more accurate in the light of existing material to think in terms of a dragon and a serpent concept which derive from separate traditions, even though the imagery seems to mingle at times.

Generally speaking, two parts of the snake-like head carry the special characteristics which identify the creature: the snout and the ear/horn region. The sole means by which the terminal parts of the multispiral forms are read as signifying 'serpent' is the small but convincing protome which reveals the snout, highly accentuated eyes and very little of the head (see Fig. 127). This triangular part just emerges from the

rectangular section. It has been seen that in many multispiral forms the snout can be tapered, or (exceptionally) be blunt, broad and turned up slightly at the tip. This turned-up snout is exemplified in the imagery of the Vratsa greave (Fig. 95) and in the Letnitsa appliqué which depicts a three-headed serpent (Fig. 103). In the ivory staff handle in the form of a wolf's head (resolving into a 'serpent' with scales), this same configuration of features is found (Fig. 102). Also to be noted on these three examples is the sharp-tipped forward-tilted ear, and the fangs on the Vratsa image and on the ivory wolf's head.

The dragon of the Dacian battle banner (Fig. 104) on Trajan's column, open-mouthed and fanged, clearly denotes an insatiable carnivore, which is believed to terrify the enemy warrior and to ravage the battlefield devouring the enemy dead.[1] Thus it definitely has associations with the underworld.

On the Gundestrup cauldron a very different serpent image is found (Fig. 4). The great serpent held in the left hand of the seated god Cernunos has horns which roll back in strong curves at the sides of the head, denoting the ram-headed serpent.[2] The function of the ram-headed

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1. Davidson, 1964, p.161.

2. Cook, 1914, pp.429-430. "The Celtic serpent is regularly ram-headed".

serpent is beneficient, as a deity itself leading soldiers into battle, and also with healing capacity.[1] This intention is more akin to the meaning of the image of the serpent on Agighiol greave no. 1 which confronts the mounted warrior. The ram-headed serpent functions as a divine protector leading the warrior into battle, as seen on the interior plaque "E" of the Gundestrup cauldron.[2]

Clearly the image of the beneficient ram-headed serpent and the Dacian dragon share nuances of power, one acting as sacred leader and the other as battle companion, the heroic aggressor.[3] Their purpose was linked: defence or deliverance of the warrior.

Whether or not the multispiral form bore either of these connotations of the Dacian dragon or serpent can only be conjectured. The ancient theme of the serpent and the tree of life should also be considered in this context, for evidence that it circulated in this eclectic era does exist. An example is found in the bronze funerary relief now in the National Museum of Denmark (Fig. 136).[4] On it the Phrygian Zeus/Sabazios

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1. As a deity leading soldiers see Ross, 1967, p.153; regarding healing capacity, p.140.
2. Ibid., p.140.
3. Ibid., p.153; Pârvan, 1972, p.114. It was the dragon image that was carried into battle, along with the carnyx, not the ram-headed serpent.
4. Cook, 1914, p.392, Note 1, pl. 27; C. Blinkenberg, Archäologishe Studien, Copenhagen-Leipzig, 1904, p.90ff, pl. 2.

is depicted in the centre surrounded by a field filled with many kinds of symbols, some of a very ancient order: rosettes, bull, caduceus, club of Heracles, fire altar, and so forth. In the right-hand corner of the relief there is depicted a serpent (the puff adder was sacred to Sabazios) wound about a tree (or post) upon which a bird is perched holding a wreath with fillets in its large beak.

Precisely what the multispiral form symbolized, or how it was used, remains unknown. No representations of such an object have so far been recovered. Possibly it was worn by a priest or king during ritual enactments of a special kind. However, the scale of the form, which is an undiminishing cylindrical shape at times twice its diameter in height, is unquestionably an awkward object to envision in place anywhere on the human arm or leg. The possibility that the multispiral form was not intended to be worn by a human being at all, and was used as a symbolic adornment on a permanent or temporary object (such as a column, post or tree trunk), should be assessed mainly on the basis of its enormous scale. Moreover, representations of a serpent wound about posts, pillars, tree trunks and columns do exist in this period in the eastern Mediterranean world (see Fig. 136).

THE FIBULA

The fibula is a category of brooch which functions on the principle of the safety-pin, and is used to hold draperies in place. This basic implement began to develop towards the end of the Mycenaean period, and was initially modest and utilitarian in function. Eventually the fibula developed into a great family of types as demonstrated in the range of manners of treatment, intrinsic values, and the imagery and forms that some types contained. The fact that the fibula was made by a textile-producing people is clearly evident in its construction and its physical capacities. The fibula would not have been a suitable dress fastener of leather or hide-wearing peoples where the hook, button and toggle were more suitable methods of closure.

Generally speaking the distinctive feature which identifies the fibula as a class is the spring-coil hinge at the head of the form with the catch-plate at the foot. However, the fibula was used over an extraordinarily wide area being carried far from its original site of invention, and underwent great modification, spawning a very large number of variations within different cultural regions.

In the Eastern Mediterranean world the fibula came into use during the final centuries of the Mycenaean

epoch.[1] It continued in use during sub-Mycenaean and Geometric periods and the beginning of the Archaic period. The appearance of the fibula in the Near East is directly related to the expansion of Mycenaean trade, reaching Cyprus and the adjoining Asiatic coast before 1200 B.C. and the Near East by the 13th century.[2] By the mid-8th century B.C. commercial ties between Phoenicia and Assyria had brought the type still further east.[3]

In Italy the fibula had a continuous history from the late Bronze Age into Etruscan times.[4] The Etruscan varieties were taken over in a fully developed condition from the Villanovans, the lake-dwelling peoples of the Lombardy plain. Besides using the simple functional type, the Etruscans raised the fibula to a new level of sumptuous decoration, though sometimes at the sacrifice of sound design and pleasing results. The Roman fibulae did not derive from the Etruscan fibulae - which probably fell out of use in about the 4th century B.C. - but are an innovation of Celtic

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1. Blinkenberg, C., Fibules grecques et orientales, Copenhagen, 1926, p.14.

2. Stronach, D.B., "The Development of the Fibula in the Near East", Iraq, 21, 1959, pp.180-206; p.181.

3. Ibid.

4. Higgins, R.A., Greek and Roman Jewellery, London, 1961, p.144.

origin.[1] The distinctive characteristic which separates the Roman fibula from the Greek form is that in place of the spring-coil, the rivet hinge (as on the modern brooch) was used. The Romans formulated the fibula into two distinct kinds of forms, the flat disc brooch and the cross-bow fibula, the latter with more than one type of pinning mechanism. The Romans carried their fibulae throughout their empire where they were modified into many local variations. The fibula remained in use in the migratory period as one of the most important pieces of jewellery worn by both men and women, and continued to be produced in the Scandinavian and Irish spheres into the early centuries of the 2nd millennium A.D.

Predecessor of the Fibula

More than one point of view has been expressed as to the origin of the fibula and its relationship to earlier methods of dress fastening. Jacobsthal saw the development of the fibula as closely related to that of the decorative straight pin of the Mycenaean period.[2] Indeed many of the earliest and simplest fibulae can be seen as a pin, with a spring-coil fashioned in the

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1. Ibid., p.192.

2. Jacobsthal, P., Greek Pins and their connexions with Europe and Asia, Oxford, 1956, p.6.

middle of the shaft (one and one half turns) with the pin section returning in parallel to the upper part of the brooch, a hook having been formed at the very end (see Fig. 137).

According to Walters the predecessor of the fibula is to be found in the form of pin (a toggle pin) recovered at Enkomi in Cyprus in 1896, made of gold, with ornamental heads. This pin had the centre of the stem widened and pierced with a hole.[1] The hole was intended for the insertion of a wire (Maxwell-Hyslop suggests that it was probably a string)[2] which was twisted around the drapery and held in place. Similar pins have been found in Northern and Central Europe.[3] Walters suggests that transition from this means to the fibula is easily understood, though I question this.

Maxwell-Hyslop cites the solid, heavy penannular 'fibula' found at Tell el Ajjul (near Gaza) in a Middle Bronze II context (c. 1750-1550) as the predecessor of the fibula (Fig. 138).[4] This type of garment fastener was in use in both Palestine and Syria for a brief period, first identified by Petrie on the evidence

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1. Walters, H.B., British Museum Catalogue of the Bronzes, Greek, Roman and Etruscan, 1899, p. lix

2. Maxwell-Hyslop, 1971, p.96.

3. Walters, 1899, p. lix.

4. Maxwell-Hyslop, 1971, p.124.

found at Tell el Ajjul.[1] In other contexts Petrie had observed that a pin was run under the terminals to form a brooch.[2] This silver example from Tell Beit Mirsim (Fig. 138), now in the Palestine Museum, may have had a moveable pin which passed across the bow (and under the overhanging terminal discs).[3] However, some questions remain as to the placement and the method of attachment of this type of garment fastener.[4]

Maxwell-Hyslop cites an object illustrated at the waist on the clothing of a tribute bearer from a Khorsabad relief (Fig. 139).[5] This object is semi-circular in form and with decorative heads at each upturned end, very similar to the penannular '<u>fibula</u>'. The ends are joined to the decorative braid that appears to run down the edge of the bearer's tunic. In sum, this semi-circular form appears to function as a two-headed toggle, and if so, the heads would presumably have slipped into loops provided on each side of the tunic. Perhaps this type of dress fastener was held in place by more than one means of attachment.

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1. Moorey, P.R.S., "Two Middle Bronze Age Brooches from Tell ed-Duweir", <u>Levant</u>, I, 1969, pp.97-99; p.97. Also (Sir) W.M.F. Petrie, <u>Ancient Gaza IV, Tell el Ajjul</u>, 1934, p.9, pl. XXII.237-8.
2. <u>Ibid</u>.
3. Maxwell-Hyslop, 1971, p.124, pl.92.
4. Moorey, 1969, p.97f.
5. Maxwell-Hyslop, 1971, p.256, fig. 161.

Method of Closure

Whatever existing form or forms preceded the fibula, none show any understanding of the principle of the spring-coil fibula which makes use of the physical properties inherent in the metals under discussion - the noble and non-ferrous metals. This invention was made in the West.[1]

The springiness induced by the effects of work-hardening of the metal in forming the coil at the head of the fibula causes the pin section to press against the hook on the catch-plate and remain in place. In time the pin section would suffer metal fatigue at the point of juncture with the spring-coil and break off, a common occurrence judging from the number of examples recovered minus the pin. A remedy to this problem was sought in a two-piece type developed in Palestine about the 10th century B.C. (see Fig. 140).[2] This type allowed a new pin to be attached to the body of the fibula. However, despite the obvious advantage of this invention, this type did not become the standard form, but continued to be produced along with another one-piece type, both surviving until at least 500 B.C.[3]

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1. Stronach, 1959, p.181ff.
2. Ibid., p.186.
3. Ibid.

The simple coil became a highly exaggerated feature in the earlier Roman type in which a coil of many turns, the bilateral spring, was built at each side of the centre bow. A Dacian example of this type is seen in Fig. 149.[1] This type is a development from the Celtic Middle La Tène fibula and continued to be produced into the 2nd century A.D.[2] From this type the spiral at the head is replaced by a cross-piece on which the pin worked on a hinge. The hinge method is that of a simple rivet as on the modern brooch. A second principle of closure used by the Romans is found in the cross-bow fibula, a development of the 2nd-3rd centuries A.D. (Fig. 148).[3] On this type a separate piece (the pin with ball head) works against a shallow groove in the cross-bar, and is inserted into the shaft (after having first passed through the material to be held in place).[4]

The Etruscans produced elaborate types of fibulae in the comb-fibula (Fig. 141)[5] and in the bolt-fibula, a

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1. Florescu, 1979, p.21; figs. 7, 12, 16.
2. Horedt, 1973, p.131.
3. Walters, 1899, fig. 40, No. 2103.
4. Ibid., Nos. 2100 and 2103.
5. Marshall, F.H., British Museum Catalogue of Jewellery, 1911, pl. XV, fig. 1372 and fig. 30 for underside view.

two-piece shoulder decoration (Fig. 142).[1] Examples of both of these can be found in the British Museum. The comb-fibula is essentially an extension of the hook-and-eye type of fastener. The long row of teeth slips into the slot created by a slender bar running parallel to the centrepiece and hooks against it. This means is duplicated to either side of the centrepiece. An Etruscan terracotta statuette, also in the British Museum, illustrates the use of this kind of form and its location on the shoulder.[2] The second unusual Etruscan fibula is a complex structure composed of horizontal tubes of gold with a female head at each terminal, and rectangular plates upon which are set four figures of a seated sphinx. The principle of closure is twofold: pins insert into the hollow tubes, and the plates bearing figures are joined by hooks and opposing eyes. Another example in silver has the plates joined by a standard hinge.[3]

None of these principles of closure were adapted for more utilitarian styles. Eventually it is the simple rivet and hinged pin that carries forward into the far later centuries.

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1. Ibid., pl. XVII, fig. 1370.
2. Ibid., p.128, fig. 31.
3. Ibid., pl. XVII, fig. 1371.

Positioning of the Fibula

Since the distinctive principle of the fibula was applied to many local variations, the evolution of the fibula can only be examined in terms of regional developments; little can be said which has an overall application. However, some observations can be made as to how the fibula was used or meant to be positioned and these observations will account for some of the structural and aesthetic decisions made as styles evolved.

In some periods, and certainly in the most ancient ones, indirect evidence, such as representations on reliefs and in vase painting, is a valuable source of information as to how and where the fibula was positioned.

The early simple Mycenaean fibula, which is closely related to the straight pin, does not appear to have had a particular surface for show since it is essentially a curving rod, decorated with a succession of swellings, grooves, beads, and reels (Fig.137).[1] The 8th century Greek fibula with a flat crescent-shaped plate for a bow (Figs. 143 a,b) and the 'sail' fibula with rectangular catch-plate incised with imagery would both logically

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1. Marshall, 1911, pl. VIII, fig. 818. H.B. Walters, "On Some Antiquities of the Mycenae Age", Journal of Hellenic Studies, 17, 1897, pp.63-77; p.63f, fig. 1.

have lain flat against the body,[1] though frequently this flat surface is still decorated on both sides. And further, in the case of the example under discussion, the size (L 22.5 cm), an extraordinary size for a fibula, is far too cumbersome to have had an everyday use. Both the size and the mythological significance of the imagery suggest that it may have been a votive fibula or that it might have been used on the clothing of statues.

By the 8th-early 7th century the leech- or boat-type fibula developed from a Villanovan type.[2] This shape is essentially that of the earlier arched type with the bow thickened in various ways to resemble a leech or a boat. Sometimes this type of fibula is referred to as 'kite', but all three types, leech, boat, and kite, can be considered as leech-type.[3] The 8th-7th century B.C. bronze leech-type fibula found near Panagyurishte (Bulgaria), is flat on one side - in effect one half of a standard leech form - and thus presents only one view (Fig. 144).[4]

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1. Walters, 1899, No. 3204 (2 views); for the fibula of the Geometric period see E. Reisinger, "Geometrische fibeln in München", Jahrbuch des deutschen archaologischen instituts, 1916, pp.288-305; see p.302, abb. 7.
2. Higgins, 1961, p.144f.
3. Ibid. Varieties called 'leech', 'boat' or 'kite' (as classified by Walters, 1899, Intro.) can be referred to as leech-type.
4. Venedikov, 1975, fig. 26.

With the Celtic fibula an entirely different kind of form developed almost from the earliest phase. In this type the bow is highly decorated with animal and human heads or masks positioned to be read in top view, but wrapping about the sides of the bow as well. While the Celts were not producers of large-scale sculpture, small forms such as fibulae were developed to be viewed almost in the round. Even on those fibulae which were highly abstracted animal forms intended to be read from both sides, coral (or, more rarely, enamel) could have been placed as a stud on the top surface of the bow, giving the form a third decorated surface.[1] A later type with plain bow and large disks inlaid with coral leads to the shift away from the conventional fibula form. The disk itself becomes the dominant feature which is placed upon a small purely functional fibula fastened to the underside.[2]

This general type, which was to be viewed from above, was developed further by the Romans[3] along with the cross-bow type which is viewed from all sides

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1. Jacobsthal, 1944, pls. 164-165.
2. Ibid., Nos. 348, 349.
3. Higgins, 1961, p.192.

because of its arching element (Fig. 148).[1] Both of these basic types continue to be manufactured well into the migratory period.

Additional Uses of the Fibula

Besides holding draperies in place, the fibula was utilized to hold different objects in place. In Assyria there has been found a bronze fibula (of a type seen in Fig. 140) attached by a gold chain and pendant jewel. This carved chalcedony in a fine gold setting is considered to be the most outstanding example of extant Assyrian jewellery, and is known as the 'Nimrud jewel' (c. 681-669 B.C.).[2]

While the Greeks wore necklaces which went entirely around the neck (and were equipped with eyes), they also wore 'half' necklaces which were held in place at each shoulder by pins or fibulae (and equipped with hooks).[3] These hooks were placed over the fibula bow (positioned with curve oriented downward). Amandry has suggested that the protuberances on the 'millwheel' fibula in

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1. Bronze fibula (provenance unknown), Ashmolean Museum, No. 1913.685.

2. Mallowan, (Sir) M.E.L., Nimrud and its Remains, I, London, 1966, p.115, pl. 58.

3. Hoffmann, H. and P.F. Davidson, Greek Gold, Boston-Richmond (Va.), 1965, p.5, figs. A and B.

fashion in Macedonia in the late 4th century served exactly this purpose of supporting a necklace, a fashion still in use today in certain rural areas of Macedonia.[1] An elaborate example of the use of millwheel fibulae is found in the 4th century B.C. Thracian example from Boukyovsti near Oryahova, Bulgaria (Figs. 146 a,b).[2] Five of the six fibulae remain to support the cordon decorated with rosettes, acorns and poppies, and human masks. A far simpler version, using the millwheel fibulae joined by a chain, has also been recovered.[3]

The Thracians used fibulae in a similar way, one at each shoulder, to hold a pectoral in place as the large gold one recovered in situ from the Moushovitsu tumulus near Douvanli, Bulgaria. The use of fibula and chain is again found in the 4th century A.D. example of twin fibulae of the Pietroasa treasure from Romania (Figs. 150-156) discussed in detail below.

Summary of Examples of Early Fibulae

1) Very late Mycenaean (Fig. 137). One of two gold fibulae found at Maroni near Amathus on Cyprus. The round rod is bounded by a triple incised ring, and the

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1. Ibid., p.6.
2. Venedikov, 1975, figs. 210-212.
3. Marshall, 1911, pl. LXVII, figs. 2845-2846.

other end has been flattened and turned up to form the catch-plate to hold the pin. The placement of the rings does not relate to the soft rectangular curve of the bow, and appears to be a random choice. By the Geometric period the position of the mouldings becomes stabilized - they punctuate the bow proper, at either end.

2) Near Eastern types (Fig. 140). The earliest imported fibula to appear in the Near East is the 'violin-bow' fibula with horizontal bow parallel to the pin.[1] This type originated in either Italy or Greece in the 14th century B.C. before spreading eastward in the 13th century.[2] During the 8th century the fibula comes into general use at sites all over Syria and Palestine, and appears in a variety of new forms. Some are remarkable in their improved methods of manufacture, and are independent of earlier Mycenaean tradition.[3] The pin and spring is commonly made separately, the end of the spring being inserted into the end of the bow (see Fig. 140). This triangular fibula with ribbed and beaded mouldings is the most comprehensive type in the Near East. In a very short period this type developed

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1. Stronach, 1959, p.182.
2. Ibid.
3. Ibid.

into a great many different varieties.

3) Asia Minor (Fig. 145).[1] The Phrygian type fibula had a distribution which seems to have run along the boundary line between Phrygia and the Assyrian buffer states in North Syria.[2] By the 8th century the Phrygians had a flourishing bronze industry and fibulae, along with other kinds of bronze articles, were exported as far as Greece, Italy, and Assyria. Representations of the Phrygian-type fibula appear on Assyrian or Neo-Hittite reliefs, further attesting their use in neighbouring lands.[3]

The Phrygians apparently used fibulae in fair numbers. In Phrygian graves bronze fibulae were found in situ placed at the shoulder, elbow, and wrist, and the fibula was the most numerous item among the contents of the jewellery-box of a Phrygian potentate.[4] The Royal Tomb at Gordion contained 145 bronze fibulae which had been wrapped in a linen cloth and placed on the table besides the bier.[5] Another grave contained

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1. Maxwell-Hyslop, pl. 246, electrum fibula from Gordion, Phrygian city mound, H 3.4 cm, University Museum, Philadelphia.

2. Stronach, 1959, p.181.

3. Young, 1958, pp.227-231; p.229.

4. Young, R.S., "VI. The Nomadic Impact: Gordion", see Mellink, 1964, p.54.

5. Ibid.

170 bronze fibulae. Fig. 145 represents a typical Phrygian type. It is semi-circular with strong mouldings at each end of the bow, and a double spiral at the head. This example is of electrum and was recovered from Gordion in the Phrygian city level.[1]

4) Greek Geometric period (Figs. 143 a,b). The Greek fibula of this period is formed with a bow of a thin vertical plate with incised imagery similar to the kind produced concurrently in vase painting. At the foot is a moulded knob terminating in a flat piece bent up to form the catch-plate. At the head is a spiral, and above this is a six spoked star-shaped form. At the end of each of these spokes is a rosette. Both sides of the plate have been worked with equal attention. It is difficult to imagine this fibula set in place in an upright position. With both surfaces worked, and only one surface visible at any time, it is clear that the artist's impulse to fill the available surface with imagery was totally unrelated to the fact that the fibula was meant to be worn. This is not unlike the decoration of the flat and open ceramic forms of this period that were painted with imagery on both faces.

5) Etruscan types (Figs. 141, 142). The Etruscans produced a great range of variations of fibulae, some

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1. See note 1, p.285.

of which were the most elaborate fibulae ever manufactured. As has been noted, some of their varieties - such as the comb-fibula (Fig. 141) and bolt-fibula (Fig. 142) - entered into a class of shoulder clasp which actually was not constructed on the principle of the fibula. Both operated, in part or wholly, by a simple hook-and-eye means of closure. Other Etruscan forms of fibulae popular from the 8th to the 6th centuries tend to be variations of the leech-type wedded to a rectangular box catch-plate.[1] Frequently animal heads or whole figures were mounted to the box catch-plate or added to the foot of the fibula. Granulation of the finest quality was used to formulate texture and geometric patterns, especially triangular shapes, on flat areas, and was also used to decorate the small animal figures.

6) Italian type, 4th-3rd century B.C. (Fig. 147).[2] The leech-shaped bow and box-shaped catch-plate continued to be produced in southern Italy (Campania).[3] Filigree was applied to the surface of the bow in patterns of tendrils and flowers typical of this period.

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1. Marshall, 1911, pl. XIX.

2. Hoffmann, 1965, no. 80. Hoffmann refers to this fibula as a 'Bow' fibula. Cleveland Museum of Art Inv. 47.504.

3. Higgins, 1961, p.132.

In the example from the Cleveland Museum collection (Fig. 147), a belt bisects the centre of the leech-shaped bow and at each end there is a disc made of simple loops. The same types of patterns continue on the catch-plate. A finial is set horizontally at the end of the catch-plate, and this is crowned by a flower. The spiral coil has an additional loop which may have been for attaching a necklace.

7) Celtic fibula. The Celtic fibula stands in strong contrast to the Etruscan and early Italian types; none have been found made in gold. The early phase of the Celtic fibula is usually a cast form, decorated in imagery of human and animal heads. The source of this mode is apparently Villanovan Italy;[1] it was not Greek as Greek figural decoration of the fibula is rare. Generally, the balance is assymmetrical, with the weight at the head and the foot counterbalanced with a head image, usually animal and frequently turned back facing the bow. The early importance of the top view eventually dictated the direction of evolution towards a dominant upper surface.

8) Late Roman cross-bow type (Fig. 148). In the cross-bow type the catch-plate section, a boxed sheath, is

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1. Jacobsthal, 1944, p.127.

joined to the cross-bar by a semi-circular bow. The cross-bar terminates with hollow onion-shaped knobs or finials. This type may have the pin attached by a hinge, or the pin may be an entirely separate piece as in the example seen in Fig. 148. The pin has a large round head and a pierced flat section immediately below this head. The shaft of the pin slides inside the boxed sheath. The balance of the form, simple as it is, is far superior to the Etruscan or early Italinn types which eventually succumbed to decadence and ostentation. This basic formula - catch-plate, bow and cross-bar - withstood the test of time, and was carried forward into the following centuries in the migratory period. The space described by the three knobs (ends of the cross-bar and pin head) was later to be modified, and to be filled in with a flat semi-circular plate, namely the foot of the <u>fibula</u>.

9) <u>Thracian type of millwheel fibula</u> (Figs. 146 a-c). Many fine examples of this Greek type have been recovered from sites in Yugoslavia and in Bulgaria. This type npparently has a function similar to the Near Eastern triangular type seen in Fig. 140 which has a recessed space at the apex of the bend intended to carry a ring or the hook of a chain. The placement of the geometric elements at one end suggests the anatomy of an animal head while the other terminal of the bow carries various

abstractions of the palmette. In some variations the millwheels are replaced by biconic or barrel-shaped beads separated by cylindrical spaces.[1] In the elaborate example of millwheel fibulae and cordon found at Boukyovsti the compound rosette and pendant acorns and poppies have been barbarized by the Thracian craftsman.[2] The head image is not a Greek contribution but a Celtic one, having the usual prominent eyes, wedge-shaped nose, and slit mouth.[3] The hair is typically indicated by straight parallel lines indicating that it was swept back from the face.[4]

10) Dacian 'Knot' fibula from Moigrad near the village of Mirșid (Salaj District) (Fig. 149).[5] According to Horedt, the origin of the Dacian 'Knot' fibula is not entirely clear; one must look to the Celtic Middle La Tène for the origin of this form.[6] Examples have been recovered in the northwestern part of Romania or Transylvania and isolated ones further southward.[7] The

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1. Hoffmann, 1966, Nos. 76, 77, 78.
2. Venedikov, 1975, p.365.
3. Finlay, I., Celtic Art, London, 1973, pp.59-61. See pl. 24 for a 3rd-2nd century example of this typical Celtic head image.
4. Ibid.
5. Seidl, J.G., Fundchronik, V, p.36 (no year).
6. Horedt, 1973, p.131.
7. Ibid.

finest examples of this type of fibula have been executed from a single piece of silver,[1] though lesser ones have been made of as many as three pieces such as the example from Medias (Sibiu District).[2] In this example a rivet joins two pieces of the under layer of the bow together and the section with the 'knots' snug-fits into the sharply bent sections which receive the tip of the pin.

The Pietroasa Fibulae

There are four fibulae in the Pietroasa Treasure[3] which, as a group, demonstrate two basically different kinds of polychrome style: the earlier method using stones cut en cabochon and a later style using flat-surfaced ones (Figs. 150-156).[4] The Treasure, which consists of 12 pieces, represents a collection accumulated over a substantial period of time and probably

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1. Florescu, 1979, p.21. According to Florescu the Moigrad fibula in Fig. 149 has been made from a single piece of silver. See Fig. 18e for a very fine example of this type of fibula which may have been made from a single piece of silver.

2. Marghitan, 1976, pl. X, fig. 1.

3. Odobescu, 1889-1900; E. Dunăreanu-Vulpe, Le Trésor de Pietroasa, Bucharest, 1967.

4. Holmquist, 1955, p.29.

from different locations. (Concerning the question of date see Appendix IV: The Pietroasa Treasure.)

(a) The Large Fibula. The Large Fibula is the most unusual of the fibulae (Figs. 150-151). On the back there is a spring-coil pin as well as four loops soldered in place along the upper margin or 'shoulders' of the bird image. This suggests that the brooch may have been sewn as well as pinned into place for greater stability. The pin is both too short and placed too low on the fibula to have held the brooch in place securely.[1] There is a well-defined arch in the body of the form (with the 'breast' curving forward). It has been suggested that this may have been used to adorn a head-dress.[2]

The body of the fibula, which is 27 cm in height and 15 cm wide, has been formulated from sheet gold and the head and neck section formed in the round.[3] This

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1. A pin and catch are usually positioned in such a way as to be slightly above the mid-point of the brooch (horizontally), and with the mid-point of the pin itself above the mid-point of the brooch (vertically). Otherwise the brooch will tip forward. In this case the centre of gravity of the Large Fibula is high (with the additional weight of the head and neck section). The rings were not extra, but necessary.

2. Dunareanu-Vulpe, 1967, p.34. Dunareanu-Vulpe draws attention to the head-dress of Sasanian kings and the similarity of this form of fibula and their decorations. This fibula is unique in this region.

3. The head section appears to have been cast; this would have been a logical procedure for such a form at this time.

head-neck section was broken from the fibula and has been reconstructed (in the throat region, which is made of silver). Four fox-tail chains suspended from loops carry pendants of rock crystal (one now missing).

On the underside there is a rectangular sheet of gold soldered in place directly behind the rectangular space outlined on the front aspect. Fine granulated wire has been soldered on to the entire edge of this sheet. In the centre of this rectangular sheet there is a deep ovoid well, presumably for holding what would have been the largest stone. Since the stone could as easily have been flat as all the others were, and the rectangular sheet has been added in order to produce this deep recess, the centre stone probably had a special value or significance.

The spring-coil (restored) is held in place by three loops. A narrow sheet of gold was soldered into place under the area where these loops were placed as a means of strengthening the construction. Fine wire was soldered about the edge of this sheet. The tip of the pin fits into a slotted tube which projects downward into the concave space created by the arched back sheet.

The fibula displays a curious blend of abstract two-dimensional depiction combined with the three-dimensional head which has more naturalistic features. The wings are indicated by fine cloisonné curving

gently inward down each side of the brooch. This theme is echoed in the V-shaped legs. At the bottom edge, between these legs, there was positioned an egg-shaped stone. The lower margin represents the tail spread open. Large stones, rectangular, round and ovoid, covered the breast. The four pendant crystals, suspended from rings, greatly improve the overall shape of the fibula by creating a less abrupt edge.

The features of the head suggest a predatory bird, for the beak is stout and hooked. The eye sockets, now misshapen, were soft hexagonals.[1] Heart-shaped stones filled the neck. Small pierced circular recessions were worked about the head and may have held pearls.[2]

(b) The Pair. Only a fragment of the gold chain which joined the two fibulae remained. This has been restored with one of silver. The height without the pendant chains is 25 cm, making this a very large piece of jewellery. The central oval shield has been composed of two sheets of gold soldered at the margin, with shapes cut out of the upper one to receive heart-shaped and round stones cut en cabochon (judging by the

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1. Dunăreanu-Vulpe, 1967, p.34. Dunăreanu-Vulpe refers to the eyes as 'lens-shaped'. There were definite angles invested in the rim of the eye, though the sides were not equilateral.

2. Ibid.

remaining few). The lower section is also backed with a solid sheet of gold, but cloisons have been built on this surface as on the Large Fibula. Flat stones have been cemented into the surface of the faceted pendants. The whole fibula is invested with a strong curve, the head well back and the long, heavy beak jutting forward. The bird image has been variously interpreted as an ibis, vulture, and hen hawk. The pronounced cere, turned-down beak, and small head combined with the serpentine neck all appear to suggest some kind of water-fowl. The most naturalistic features are the elaborate beak and the relationship of the head-neck curve; all in all, it is a remarkably convincing image.

On the underside the 'onion heads',[1] mounted on a hollow tube, are surmounted by the hinge. The pin appears to be held in place by a rivet. Rings have been soldered to the margin of the lower section to carry the fox-tail chains.

The division of the surface space has been carried out by the theme of groups of three and five stones. This division is repeated in the chains and pendants.

When positioned on clothing, the head and neck portion of these fibulae would have been above the

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1. Ibid., p.37.

shoulder-line. The pin and the shaft into which it fits are both given a curve parallel to that of the fibula itself. The pin shaft is located at the upper margin of the shield for this purpose.

(c) The Small Fibula. The Small Fibula is known to have been one of a pair,[1] and is the best preserved of all the Pietroasa fibulae. In terms of construction, it is also the most complex and skilfully made of these fibulae. Attention has been drawn to the fact that the stones, being flat, represent a later type of polychrome.[2] Moreover, the Small Fibula represents a totally new sense of order and structural discipline which stands in sharp contrast to the other fibulae. While stone is the dominant feature of the larger fibulae, it has been reduced to a decorative aspect in the Small Fibula. The craftsman who made it was apparently more concerned with creating a durable structure.

Several means of strengthening the fibula have been used (see Figs. 155, 156). On the upper margin of the shield a flat strip (with rounded ends) has been soldered to support further the two circular stone mountings soldered on edge to the shield and the

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1. Ibid., p.37.
2. Ibid., p.35.

rectangular section above (Fig. 155). In the upper section (Fig. 156) small strips of metal surround the pin shaft and the curving hexagonal unit. These in turn are joined to the inlaid section, binding these three parts into one.

The principle of strategic placement of small spheres or granules of metal to adjacent flat surfaces has been used in several places (Fig. 155).[1] Four granules have been placed in each spiral to hold the interior curl securely in place. At the point of juncture of this teardrop-shaped projection with the centre rectangular section three granules have been positioned to occupy the right-angled space. As this section is joined to the shield and rectangular section only by a small surface area, these granules greatly improve the strength of this bond. Turning to the front view (Fig. 154), there can be seen a group of three granules at the top and bottom margin of the shield, and appropriately larger ones to each side of these. This placement has not only increased the surface area of contact, but allowed a more delicate joining of parts.

Abstract as this fibula is in stylization, the theme of the shield fibula wedded to animal imagery is still

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1. See Glossary: s.v. filigree.

present. This reference is found in the curving hexagonal section which holds the uppermost stone, a garnet. Certainly this stone could have been placed directly on top of the pyramid of stones without this elaborate structure. Instead, a hexagonally-shaped tube which both curves and diminishes in circumference has been fabricated. Small triangles have been pierce-cut from the end of the mounting, decreasing the weight and at the same time allowing light to pass through the stone. Recalling the soft hexagonal eye shape of the Large Fibula, the hexagonal shape of the stone may have a reference to the sense of sight.[1] In Sasanian imagery the eye of the predatory bird is frequently indicated as green or with a multi-sided rim.

The 'onion heads' have been made with six sides and joined together by a six-sided tube. The super-imposed hinge end of the pin is held in place with what appears to be a rivet. On the centre shield three shapes of stones have been inlaid. All but the centre stone have a dot-in-circle pattern engraved on the surface. Traces of a white substance fill the recesses

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1. Vogel, 1926, pp.18-26. The emerald (which has a hexagonal crystalline structure) is the stone sacred to Garuda - the 'Garutmant'. This theme of the prophylactic powers of a stone borne on a beast's head is carried into Western lore in the idea of the dragon with a jewel on its forehead.

of the patterns. It is interesting to note that the ring which has been soldered to the terminal of the chain has been left unsoldered, but positioned for maximum strength (the opening is as close as possible to the point of soldering).

(d) The Fibulae Compared. The three types of fibulae of the Pietroasa Treasure represent a wide range of aesthetic values and fabrication skills. All three types have varying degrees of animal references, and either complete or vestigial 'onion head' features. The Pair and the Small Fibula are examples of the shield fibula joined to the animal image. Both appear to have rivet hinges. The Small Fibula has stones cut en cabochon as well as flat-surfaced. In terms of craftsmanship and knowledge of sound, rational construction, the Small Fibula demonstrates a substantial advance in technical knowledge over the other fibulae. Evidence of an interplay of technique and innovatory design is seen in the pierced work at the end of the hexagonal stone mounting and in the placement of granules in the construction.[1]

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1. The subtraction of metal from the end of the hexagonally-shaped mounting is unusual. Visually the mounting begins to approach a claw-setting, but functionally this is not so (for claw-setting, see Glossary: s.v. stone-setting).

CHAPTER VI

SUMMARY

Research on the history of the lands to the west of the Black Sea, and the adjacent regions, has advanced considerably in recent decades. Archaeological evidence, some of which is in the form of metalwork, has contributed to a revised appraisal of the cultural complexity of this region. Vague generalities which have remained unquestioned for many years - such as the presumed Scythian presence - have been replaced by factual information and this in turn has resulted in more cautious hypotheses.[1] Today, instead of a search for a dominant influence operating at a given time within a definite region, there is a concern for the definition of contributory elements, coming from many sources.[2]

Excavations carried out in the 1960s at Phrygian Gordion in northwestern Anatolia[3] have increased understanding in yet another intermediate zone between Urartu and Europe.[4] Evidence has been found in products of the

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1. Berciu, 1969, p.131; Crişan, 1965, p.1f; Iliescu, 1975, p.14.

2. Powell, 1971, pp.204-205. Powell's reference on this subject is specifically in regard to the Gundestrup cauldron which he assigned to Carpatho-Danubian Europe.

3. See Mellink, 1964.

4. Powell, 1971, p.185.

Late Urnfeld bronze industry of features originally Urartian, which had been modified through Phrygian channels.[1] These innovations were introduced into Central Europe at somewhat different times during approximately the 9th and 8th centuries B.C.[2]

The effects of the simultaneous expansion of the Greeks and Scythians into the north and western Black Sea region are being reconsidered. Romanian archaeologists do not subscribe to the former theory that Scythians controlled, or were even present in, large parts of present-day Romanian territory.[3] The more recent and sensitive questions concern defining 'nomadic traits', identifying their bearers and assessing their place in both Thraco-Getic and Daco-Getic art.[4]

The Greek penetration into the Black Sea and that of the Romans had distinctly different foundations and produced different effects. The Greek enterprise in the Black Sea region was commercial; the Roman presence always had a military character though some development of trade preceded occupation.[5] Both cultures used this

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1. Ibid., p.186.
2. Ibid.
3. See Note 1, p.300.
4. Crișan, 1965, p.145; Harmatta, 1970, p.35f.; Sandars, 1971, p.106f.
5. Părvan, 1972, p.132f.

region as a source for foodstuffs, especially grain. This demand, met by the local peoples, led to real progress in their agricultural technology, and brought new lands under cultivation even into the forested steppe region.[1] In terms of genuine cultural advance, the progress in agricultural technology was permanent. It survived the Roman retreat, and was later utilized by Byzantium.

A secondary development resulting from the export of vast stores of grain was that some local landlords and middlemen became wealthy. This accumulation of wealth by a few led to social stratification and the emergence of an élite class which created for itself, if not a distinct style, then at least a heroic stamp.[2]

The leadership group of the Thracians and the Thraco-Getae did not turn to the Greeks in emulation of their court procedure and ritual, but to Persia.[3]

Beginning in the late 6th century a series of successive events and conditions contributed to the Iranization of coastal Thrace.[4] The establishment of Thrace as the Achaemenian satrapy of Skudra, for a brief period in the early 5th century was only one aspect of

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1. Brajčevskij, 1965, p.377.
2. Ibid., p.378; Venedikov, 1975, p.51.
3. Venedikov, 1975, p.51.
4. Sandars, 1971, pp.103-104.

Achaemenian influence. Miletus had established colonial cities on the western coast of the Black Sea and through this coastal trade these cities were kept in touch with Sinope on the southern coast.[1] Anatolia, itself a Persian satrapy, was a sphere in which antiquated art styles from the east had gathered and were transferred westward into Thrace and adapted to local use.[2]

The Romanization process carried out within the Roman province of Dacia, Transylvania in particular, and the Dobrugea, a Greco-Roman sphere, is a well accepted phenomenon (see Map III).[3] Brajčevskij has made reference to the region of the Lower Danube, that is the Geto-Dacian territory, as a place where the Roman provincial civilisation is, for the first time, manifest.[4] While evidence of late Greek and Roman influence is to be found in South Russia, in the valleys of the Dnieper, Bug and Don and their neighbouring regions, it is not to be observed to the north in the region of Kiev nor to the east of this centre.[5]

The Sarmatians and their kindred tribes brought yet another version of nomadic art into the North Pontis, one

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1. Culican, 1965, p.146.

2. Sandars, N.K., Prehistoric Art in Europe, London, 1968, pp. 209, 216.

3. Daicoviciu, 1975.

4. Brajčevskij, 1965, p.374.

5. Ibid., p.372.

laden with Iranian features.[1] Intermarriage between Sarmatian and Crimean-Scythians accelerated the Iranization of the whole population, and by the 1st centuries A.D. the Bosporan Kingdom assumed an almost completely Sarmatian character.[2] When their supremacy ended with the Gothic invasion into southern Russia in about 200 A.D., the period of Iranization which began with the Scythians also ended. A period of assimilation between the Sarmatians and the Goths followed conquest, each influencing the other.[3] In 260 A.D. the Goths invaded Dacia, and by 271 A.D. Dacia was abandoned by the Romans.

THRACO-GETIC METALWORK

The kinds of metal objects which were produced in Thraco-Getic workshops stand in strong contrast technically to imported work and that presumably made by foreign craftsmen. Thraco-Getic metalwork, like the later Dacian metalwork, is mainly an art of silversmithing, and consequently there are few comparisons to be made with the work of the Greek goldsmith. The golden Coţofeni helmet and the gold fragments of the 5th century Cucuteni-Băiceni helmet are outstanding

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1. Sulimirski, 1970, pp. 81, 115, 120.
2. Ibid., p.150.
3. Ibid., pp.163-164.

exceptions which do not have parallels in Greek metalwork known to the author.

It has been observed that the development of a high-level metal workshop evolves only with the slow accumulation of skills and technical knowledge, a constant supply of metal, and a lively market for exchange. These ideal conditions can occur only in times of peace or protected situations, and in times of economic stability which was seldom the case in the Thraco-Getic world for long periods of time.

While imports reveal something of the cultural contacts which occurred during a given period, they are not in themselves indicative of real cultural penetration.[1] More revealing are the kinds of objects that local craftsmen produced and those imports they chose to imitate. For the Thraco-Getic craftsmen these vessels were the phiale, rhyton and situla. For these borrowed forms the Thraco-Getae looked to the east both for the object and for the style in which it was executed. The examples of locally produced phialai are in the Achaemenian reeded-body style which was later produced in the west as well.[2] The rhyton was not a vessel in popular use among the Greeks, though they did produce

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1. Brajčevskij, 1965, p.375.

2. Strong, 1966, pp.76-77; Berciu, 1964, figs. 23a-25.

them for trade.[1] The small-waisted situla, a rare form any time,[2] was by this period a long forgotten one and harked back to distant Amlash and Marlik.[3] For this reason this form has been noted as the most diagnostic of the Agighiol metalwork.[4]

DACIAN METALWORK

The Dacian silversmiths did produce a Celtic-type fibula[5] and imitate the Hellenistic mastos, the footless bowl (probably used for drinking) found throughout the Roman world.[6] However, the form considered most typically Dacian is the multispiral 'bracelet'. While the inspiration for this form could have come from the east or the Mediterranean world[7] - the Sarmatian version with geometric stylization lies much closer to the Dacian type. The Greek version is usually made of gold, frequently inlaid with stone or glass, and the serpent

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1. Sandars, 1971, p.107.
2. Venedikov, 1975, p.67.
3. Berciu, 1969, p.113f, fig. 81; Powell, 1971, p.190; Sandars, 1971, p.111.
4. Powell, 1971, p.190.
5. Horedt, 1973, p.131.
6. Strong, 1966, p.108.
7. Medelet, 1974, p.240.

image is treated naturalistically and in great detail.[1] The appliqué and phalera, again both widely used, were of eastern origin.

STYLIZATION

The territory under discussion - essentially the lands of present-day Romania - has a very complex history, and thus it is difficult to treat the material in any other way than by region. However, a general comparison of the effect of the impact of the Greek culture on that of the Celt's may be useful. Sandars has observed that, while the Celts knew Greek work, they adapted, rejected and transformed it as they pleased, while still maintaining their own integrity.[2] Their markets were not flooded with Greek goods.[3] The impact of the late Greek culture was very different in the Thraco-Getic lands and different again in South Russia and farther northward.[4]

Despite the volume of Greek imports, which far surpassed those of the Romans in both variety and volume,[5]

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1. For a naturalistic example see Inventory No. 24824 in the Museo Archeologico Nazionale, Naples.
2. Sandars, 1971, p.111.
3. Ibid.
4. Brajčevskij, 1965, p.371.
5. Ibid.

and centuries of contact with the Greek culture, there was no real reciprocity between these peoples.[1] The Greek culture was not only too mature,[2] but of an alien spirit.[3] The human figure and animal imagery were never successfully mastered by the Thraco-Getic craftsman. The fantastic animal, as on the Agighiol situlae, and the decorative animal heads on the Craiova appliqués were more to his liking. The propensity for geometricizing natural forms, symmetry, and medial balance, all of them features pronounced in Thracian art generally, was never set aside.[4] The tendency to create decorative lines and repetitive patterns continued. The long enduring feather-scale pattern, used in Urartian and Achaemenian toreutics,[5] came again into use on the silver cups, both the footed variety and footless,[6] and was used yet again in far later times on the 5th century A.D. Concești amphora (Fig. 157).[7] All factors considered,

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1. Sandars, 1971, p.111.

2. Ibid.

3. Ibid.; Venedikov, 1975, pp.10-12.

4. Ognenova-Marinova, L., "Notes sur la toreutique antique en thrace", Thracia, III, 1974, pp.185-193; p.189.

5. Culican, 1965, pp.145-146.

6. See Marghitan, 1977, p.48f, Tezaurul de la Sincraieni (Harghita District). The Sincraieni treasure, found in 1953, is composed of 15 silver cups. Of these, one mastos-type cup and three footed cups have the feather-scale pattern worked on the body of the cup (see pl. XXIV; pls. XXVII, XXX, XXXII).

7. Matzulewitsch, L., Byzantinische Antike, Berlin-Leipzig, 1929, p.131ff, pls. 36-43.

it can be observed that the decorative qualities found in eastern styles, and those bred into Scythian and Sarmatian art, found more favour and application in Thraco-Getic and Dacian art than other possibilities introduced there.

CONCLUSIONS

During the early stages of examining the metalwork recovered in the Lower Danubian region, it became apparent that sensitive analysis of these works would only result from examining related forms in fairly large numbers. The conclusions drawn from this study fall largely into two categories - observations which specifically concern Thraco-Getic and Dacian metalwork, and those which concern the history of metalwork generally.

The metalwork of the Lower Danubian region demonstrates a predominantly east-west flow of acculturating influence which began before the Achaemenian presence. Greek culture was not, by and large, absorbed into this region, though aspects of Roman culture were. Notable among these were the influence of Latin and improved agricultural technology.

Analysis of the forms and symbols exhibited in the Thraco-Getic and Dacian products has led to the conclusion that the metalwork of a culture which had attained a

modest metalworking proficiency and not synthesized a style is as valuable diagnostically as metalwork from highly evolved workshops. Such articles may reveal more about the culture of the producers and owners than goods produced in commercial workshops for export trade.

Analysis of the techniques that were used suggests that metalworking studios evolve only with the slow accumulation of skills learned through generations of experiment.

The forms, motifs, symbols and patterns expressed in metalwork can have enormous histories. Since metalwork is portable, articles can be found distributed over vast areas where they may be adapted for local use even in considerably later times. Analysis of examples of these categories becomes far more meaningful when they are examined as expressions of forms which have a long tradition.

Finally it can be observed that the study of metalwork, owing to the many factors cited - tenacious tradition, longevity of design and symbols, portability, capacity for modification, and so forth - lends itself well to broadly-based examination rather than simply local ones, or studies limited to brief periods. For some questions, this is demonstrably the only method applicable.

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GLOSSARY AND TECHNICAL NOTES

GLOSSARY AND TECHNICAL NOTES

A. PROCESSES

(1) Annealing - Annealing is a process of softening a metal, such as gold, silver, or bronze, hardened by cold working procedures (hammering, spinning, or rolling). The crystals of which the metal is composed become distorted and tend to break up. The metal becomes hard, and if it is subjected to more pressure, cracking can result. In order to avoid this condition the worked metal is heated to its appropriate annealing temperature, which obviously differs from alloy to alloy, and then cooled. This process was discovered more than 4500 years ago. Non-ferrous metals, when heated to red-hot, can be plunged into water or "quenched", and remain up to 25 per cent softer than if air cooled. Ferrous metals, however, behave in the opposite way, and become hard on quenching.

(2) Appliqué[1] - Appliquing is a technique by which small pieces of metal are soldered into place on top of a larger one to create a decorative effect.

Appliqué[2] - a type of jewellery (see Chapter V).

(3) Caulking - When a thick rim is required on a vessel which is being raised, the metal is forced back on itself by delivering gentle, successive blows (using

a collet hammer) to the flat surface of the edge. This procedure, known as caulking, is carried out at the end of each course prior to annealing.

(4) Cire perdue or the lost wax process of casting. The desired form is created, made of wax usually but could be made of any organic material such as wood. A spruing system which consists of inflow gates or runner made of cylindrical wax is attached to the form. A second set is made, the vents, and attached to prominences or the lower edge when positioned for casting. These conduits will lead off the gases which will be inside the mould after the wax is oxidised. A reservoir or entry cup is formed of wax and attached to the sprues at their common joining point. This entire assemblage, as positioned for casting, the reservoir or entry cup uppermost, the sprues descending, and form with the vents attached to the lower edge ascending, is then invested or enclosed within a clay matrix. This is the mould itself. When this clay has hardened, the mould is "burned out" in a furnace. The void, an exact replica of the entire assemblage, is now ready to receive the molten metal which is introduced at the reservoir or entry cup. As the sprues and form become filled with molten metal, the gases are expelled out the vents. After allowing the metal to cool somewhat, the mould is plunged into water. The differential of

temperature causes the clay mould to shatter, breaking away and freeing the form. The spruing system is then chiselled or sawn from the completed form.

(5) Colloid hard-soldering - This method of soldering is used to produce filigree and granulation. A copper salt is mixed with glue such as gum tragacanth or seccotine (fish glue). The two parts to be joined are coated with this mixture and positioned for soldering. In the heating process the copper salt reduces to copper oxide and the glue to carbon. The carbon and oxygen combine, producing carbon dioxide, and the copper deposits in a fine layer at the contact points of the parts resulting in a durable joint. This is a chemical rather than a mechanical method of soldering and the only one possible that could have produced the exquisite filigree and granulation of the Etruscan and Greek goldsmiths whose highest achievements of this process were reached during the 8th to the 5th centuries B.C.[1]

(6) "Enrichment of surface" - Gold and silver articles buried in soil impregnated with salt can have the copper removed from the solder used in joinery and cause these joinings to become undetectable. This surface leaching has caused many problems in analysing the construction method used in the manufacture of ancient forms.

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1. Higgins, 1961, pp.20-23.

(7) Filigree - Filigree is a type of metalwork by which fine to extremely fine wires are worked together, rolled and twisted frequently, into patterns and soldered into place to produce a structural form. The term is sometimes employed inaccurately to fine wire work which is placed on a backing plate, and thus is not the form itself, but an applied decoration only. True filigree has its own supporting skeletal structure, generally composed from the heavier wires within the piece, strategically placed to counter stress. These are interconnected or "laced" with finer wires. Frequently grains or minute spheres are used in connection with the wires. The process using such granules is called granulation. These grains or granules can add a great deal of structural strength to delicate filigree work, when placed at junctures of two or more wires, or at a right angle junction. Historically the technique of filigree was at its height of perfection in the 5th and 4th centuries B.C. It was practised to only a limited extent by the Romans but the practice never died out entirely as did the process of granulation.

(8) Gilding - When gilding was first used is not known, but certainly by the 4th century B.C. Until modern times gilding of silver was effected by the use of an amalgam of mercury and gold. Minute pieces of gold, or gold filings, are mixed into pure mercury.

This is then painted onto the metal and the mercury is driven off by heat.

(9) Granulation - Granulation is a surface embellishing procedure primarily. However, a few examples have been found where a "bead chain" of granules soldered side by side has been structured.[1] Granules can be formed in a number of ways, but a likely choice for producing a large number of equal sized ones would be to place filings of gold in layers into a crucible filled with powdered charcoal, and place this covered into a furnace. After reaching the molten stage, the filings will have naturally formed perfect spheres in the process of melting. These granules, which the Etruscans and Greeks produced as minute as 0.14 - 0.16 mm, could only be soldered in place by means of colloid hard soldering (see above). The earliest examples of this technique yet found are from the royal jewellery from Ur, but this is already skilfully executed, strongly suggesting that it had a long history even then.[2]

(10) Gold-assaying - The method for assessing the purity of gold was perfected by 1400 B.C. by the Mesopotamians. A touch stone is used to assess the quality of the gold

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1. See P. Davidson's literature for analysis of these problems.

2. See "Special Report No. 22", A Review of the History and Technique of Granulation, The Worshipful Company of Goldsmiths, London.

used in a manufactured piece of goldwork. The touch stone is simply a hard, black stone and the "touch needles" which are used with it are sticks of gold of various known qualities. A streak is produced on the touch stone by rubbing it against an appropriate part of the goldwork and streaks are also produced by the needles which appear close in colour. Aqua regia (nitric acid and hydrochloric acid) is applied to the two or more streaks and the results of the attack of the acid, which causes greater darkening when gold is less pure, on the gold streaks are observed.

For an accurate analysis, assaying is necessary. In this process the metals are separated by the use of fire and the weight of the remainder is compared with the original weight of the amount of metal used.

(11) Inlay - in metal. (For inlay of gemstones and glass, see under stone-setting). In order to inlay metal into a metal surface a groove of various kinds must be prepared. It can be done by means of a graver which subtracts metal from the surface. In profile this subtraction can be 1) keyed, that is, wider at the bottom of the groove than at the surface of the metal itself; 2) at right angles in the bottom profile; 3) rounded trench - and this can be further punched or indented. These little indentations then fill up with the inlaid metal, i.e. it produces tiny studs. A

groove can be produced also by means of chasing with a tracer. No metal is then subtracted, rather it is slightly compacted at the bottom of the trough and pushed out and slightly up to either side of the tracer. These traced lines can also be undercut in that they are wider at the bottom than at the top, on one or on both sides. Etching with acid is another means of producing a groove or trench for inlay.

Among the earliest examples of inlay are the blades of spears or axes from the Royal Cemetery at Ur. At Alaca Hüyük in Anatolia a fine example was found in a copper stag image from a pole-top dated to the mid-third millennium B.C. This had been inlaid with gold and electrum. Some truly marvellous inlay is to be found in the daggers produced in the Late Bronze Age and found at Mycenae in South Greece, and dated to the mid-second millennium B.C. On each side of the bronze blade, a slot had been prepared to receive a single plate already finalized, this being either silver or less commonly gold. On these plates were scenes of human and animal figures produced by means of inlaid gold, silver, copper, alloys of these and niello.[1]

The period of consummate skill in inlay of wire and laminae of gold, silver and copper, was reached by the

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1. Higgins, R., Minoan and Mycenaean Art, New York-Washington, 1967, figs. 169-172.

Islamic metal workers, especially in the 11-14th century period.

(12) Opus interrasile - The Roman term for the process of working designs in sheet gold by cutting out portions with a chisel. This process became popular in the Late Roman period, but was not their invention as examples are to be found in Early Etruscan work.

(13) Overfired joints - Overfiring of joints can result in a join that is invisible to the naked eye. As the area is super-heated, the solder, say gold and copper, used to join gold, will penetrate more deeply into the gold parts being joined, and the solder in effect driven to become a higher percentage of gold solder as the copper molecules alloy themselves with (or take up) more gold than they initially had. By driving the temperature to 1000°C, a 10% copper, 90% gold solder can be altered to a 3% copper, 97% gold alloy. Such a differential is not detectable to the eye. A similar process is possible with silver and copper solder joining parts of silver. In brazing on bronze, the same condition has been mistaken for welded joints.[1]

(14) Overlay - The surface to be overlaid is roughed with a chisel. Cuts made as fine as 125-150 cm are incised at different angles or forming a cross-

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1. Maryon, 1949, p.114.

hatched pattern. Thin, fine gold or fine silver sheets or wires which have been annealed can be tapped or burnished into place and gripped by the roughened surface. Gold foil (which can in Greek goldwork be a few 1000's of a centimetre in thickness) can also be used to build up a layer of overlay, being burnished successively into place sheet by sheet. In Mycenaean times fairly thick foils of silver and gold were used commonly. A whole surface can be overlaid with gold or silver by using a series of annealed wires laid side by side across the pattern and tapped into place. With careful tapping it will spread and cover the surface. Maryon aptly cautions that both inlay and overlay are frequently incorrectly referred to as "damascening in gold". Damascening correctly refers to the process of producing watered steel.[1]

(15) Raising - The process by which vessels (or any hollow form such as a helmet) are produced is called raising. An annealed sheet of metal, generally circular, is punch-marked at the centre, establishing a visual guide for the smith, one which traditionally is never removed. Frequently the flat sheet is subjected to some amount of sinking (stretching on a sandbag) prior to beginning the first course. The disk, now in the

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1. Maryon, 1949, p.112.

shape of a shallow bowl is positioned over the end of a T-stake (see Part B, 20). The right-angle edge of the stake acts as a fulcrum against which the disk is held, gripped securely by the left hand. With the raising hammer (see Part B, 10) successive, overlapping blows are delivered to the disk, row on row, in a continuous spiral pattern until the entire surface has been covered. This constitutes one course. The left hand maintains the position of the disk at the required angle so that the impact of the hammer blow falls just above the edge of the T-stake. This drives the metal forward in a direction parallel to the horizontal surfaces of the stake. Raisings are not shaped by hammering the disk to conform to the shape of the stake itself. Since the smith can only sense the relationship of the metal to the stake, not actually seeing it, his adjustments in angle are guided partly by sound. A false blow results in a different sound and the angle is readjusted by the left hand. A raising is annealed at the end of each course (See Part A, 1).

After a vessel has been formulated to the desired shape, the marks of the raising hammer are removed by planishing. The planishing hammer has a slightly convex or dead flat surface. The effect of this hammer is to spread the metal radially from the point of impact. The horizontal marks left by the raising wedge are "filled"

by metal being pushed outward with each blow of the planishing hammer. The planishing hammer is used to strike overlapping blows. Some smiths prefer planishing in tiny circular patterns rather than a single linear one. A second (and possibly third) lighter-weight planishing hammer may be used to further reduce the now "dimpled" surface pattern. A raising is generally not annealed after its final planishing, leaving it in a hardened condition.

(16) Repoussé - Strictly speaking, repoussé is that part of the work which is done from the reverse side of the metal, the bossing up of the lines or patterns from the back; chasing is the part which is done from the front. But in modern times the term repoussé has been extended to cover all works in relief; whether done from the back or the front the term chasing is applied. This word chasing is also applied to the process of touching up and finishing of cast work with hand-held punches.[1] However, both terms are used in this text for a more precise interpretative analysis. 'Setting down' is the phrase used when working on the exterior of a form, to apply to the process of working or pushing back the surface surrounding an image to emphasize and sharpen up this imagery. Repoussé was the commonest

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1. Maryon, 1949, p.112.

form of decoration in ancient plate, being found in both gold and silver from Mycenaean times onward.

(17) Rivet - As a mechanical means of joining pieces of metal, generally plates, the rivet knows a long history. Among the earliest vessels with rivets are bowls found at Ur in Mesopotamia.[1] The rivet is essentially a short, cylindrical piece of stock with one end headed. The other end is fashioned into a head *in situ*.

(18) Sinking metal - This is done by the use of hammers or stakes (stakes shaped like a mushroom with a long handle for securing in a stake-holder). A disk of annealed metal is placed on a sandbag and beaten into a cup or bowl shape by the use of blows dealt downward into the interior as with a pestle. Generally the disk will be thicker than that used for a raising as it is a stretching rather than a placement process. The first metal bowls were produced in Sumeria and these were either raised or "sunk" as described.

(19) Sintering - The joining together without complete fusion of grains or nuggets of metal is called sintering. Maryon points out that a completed gold form which exhibits variations in surface coloration could be a

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1. Maryon, 1949, p.102.

product of gold prepared by sintering. Since native gold is always alloyed (usually with silver or copper), it is found naturally in various hues. A random collection of nuggets sintered together would yield variations that would be visible. (He states that variations of colour could also be due to selective enrichment of the surface owing to contact with a salty conglomerate of irregular activity).[1]

(20) Stamping - For repeating a pattern or motif many times, or in a mass production process, a die is used. The stamp or die face will be applied to the reverse side of the metal requiring an impression, and struck from the back. The image produced on the surface exterior may subsequently be chased to sharpen up detail or add other features usually too fine for the stamping process. In a related process the reverse is cut into the face of the die (the reverse of the image desired), a subtractive or an intaglio process. The die is applied to the front surface of the metal requiring impression and struck. This process is referred to as striking as in the process of producing coins. These processes became highly developed for producing in volume for trade. Much Greek and Roman jewellery requiring human and animal figures was produced by these methods.

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1. Maryon, 1949, p.106.

(21) Stone-setting - The most common means of setting stones during the period under discussion was by use of bezels or collets. The bezel setting was the early means of setting stone cut en cabochon. A bezel is made from a thin strip of metal, cut slightly longer than the length of the circumference of the stone. This strip is soldered to form a simple ring. This ring, now very pliable, is fitted to the stone to insure an exact fit. The bezel is then soldered on to the backing sheet. After the stone has been set in place, the edge of the bezel is burnished against the stone. In later Roman work the bezel is lower. By the 3rd century A.D. Roman jewellery became at last independent of the Greek tradition, and new influences, believed to have originated in Western Asia, begin to appear. One of these new techniques is polychrome. The bezel is now minimal or not used at all. Then the stone is set into an aperture cut to its shape and size. A slight projection runs on the underside (the stone bearer). On the front surface, metal is gently tapped over the edge of the stone. Gold is the obvious choice for this type of setting because of its greater malleability than any other metal.[1] In the claw-setting, the stone is held in place by the use of small projections from a bezel. These may be small wires

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1. Maryon, 1971, p.81f.

soldered into place, or the bezel may have had metal filed away to produce a saw-toothed profile. The tips of these projections are pressed down onto the stone.

(22) Swaging - Swaging is used to form tubing from flat sheet metal. The swage-block is made of steel with a succession of half-round grooves of graduated diameters. The metal to be formed is laid over the desired groove and a mandrel (a steel rod) is placed on top. This rod is hammered, forcing the metal to conform to the circular groove. The sheet is rotated so that gradually it becomes tubular.

Similarly, the neck of a vessel can be elongated by using a large swage-block and mandrel. The mandrel is placed inside the throat of the vessel. The neck of the vessel is placed on the groove required and the vessel is rotated as the neck is hammered. The metal, trapped from spreading sideways, is forced to move horizontally, and gradually the neck of the vessel elongates. This procedure may be repeated successively in increasingly narrower grooves until the desired shape has been developed. The vessel will require annealing frequently to keep the metal pliable.

(23) Upsetting Metal - Upsetting metal is a method of forging by which metal is piled onto itself. It is a thickening procedure applied to rods.

(24) Welding - Today this word is so strongly associated with the industrial oxyacetylene welding process that it has created confusion as to the earlier meanings of this word.

i) Pressure welding, cold. Gold, the most malleable of all metals, lends itself best to pressure welding. This is demonstrated in the application of gold leaf which can be welded by hand pressure using a burin of wood or metal, to apply gold leaf to a scored surface. Thin sheets of gold also can be pressure welded, the two surfaces becoming united into a homogeneous mass with a crystalline structure.

ii) Pressure welding, hot. Iron heated to a temperature of 1350°C can be pressure welded by using a forging hammer on an anvil which may or may not be heated in advance. Such joins cannot be made with the non-ferrous metals because of oxides which develop on their surfaces when heated. Since iron at this temperature is constantly losing its surface oxides from the incandescent surface, the two surfaces come into intimate contact, the hammer blows breaking up the crystalline structure on the surface and new crystals forming in interlocking fashion across the join.[1]

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1. See Maryon, 1949, p.103.

iii) Fusion welding. Two plates of metal are heated in the area to be joined until they become sufficiently hot to flow together. Frequently new metal of the same kind is introduced in the form of a rod or wire. This is only necessary to have an excess of metal to fill the gaps or to account for distortion through the flowing or moving of the metal. It is not, as in the case of brazing, filling the space between the two pieces being joined. While this kind of joining is usually carried out on ferrous metals, it is possible to fuse gold and silver also.

(25) Work hardened or metal fatigue - Pressure changes the molecular arrangement of metal crystals. Whether through work processes which put pressure onto the metal being formed, such as hammering, spinning or rolling, or through normal use of a finished metal object, the crystalline structure of the metal gradually changes and stresses are set up. These stresses tend towards eventual cracking at critical points within the piece. Customarily the condition of metal fatigue is used in reference to a metal object which has been brought to the point of cracking, and it is not employed to work in process. Time is a second factor which changes molecular structure. The springy quality developed in a metal form will gradually be lost over a long period of

time due to slow molecular realignment. When the springy quality no longer exists, the metal is referred to as "dead".

B. MATERIALS AND TOOLS

1) Bitumen - Bitumen is composed of hydrocarbons of petroleum, either natural or distilled. Bitumen was a favoured material employed by Islamic metal workers as inlaying material in chased metal work during some periods. Generally it was set into the background and provided a handsome contrast to the silver and/or gold inlay.

2) Brass - Brass is a non-ferrous alloy composed of various percentages of copper and zinc. It was first mentioned in the 8th century B.C. in the time of King Sargon II.[1]

3) Bronze - Bronze is an alloy of copper hardened by tin. Up to 13.2% of tin can be added, but above this percentage, the bronze becomes brittle and unsuitable for cold working.[2] Lead is added to improve casting

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1. Wulff, H.E., The Traditional Crafts of Persia, Cambridge, Mass., 1967, p.12.
2. Strong, 1976, p.25.

properties, but reduces those of cold working.

4) Chasing tool - A chasing tool is a small chisel which is struck with a hammer. It can be made of bronze if it is to work the surface of bronze, silver or gold. Generally they are made from mild steel. The rod of which it is composed has a range of thicknesses even up to a centimetre in diameter, but not commonly. A chasing tool can be shaped with an edge for cutting as employed in the process of refining a casting, or it can be dull and rounded, shaped variously for the displacement of metal in the process of repoussé or chasing.

5) Draw plates - Draw plates are thick plates (made today of steel) which are pierced with a range of holes with graduating diameters. The hole is smaller on one side of the plate than the other, thus it is actually in the form of a truncated cone. Annealed metal wire is introduced into the larger of the openings and pulled with the aid of tongs through the aperture. The effect is to reduce the wire in cross-section. The draw plate was not introduced until the end of the Roman period, if as early as that.[1] Certainly it was unknown to the Greeks. Prior to the draw plate, sheet metal cut into strips was hammered or rolled until rounded in cross-section.

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1. Higgins, 1961, p.14.

6) Electrum - Electrum is an alloy, either natural or man-made, of gold and silver. More than 25% to 30% silver added to gold will produce an alloy that is difficult to distinguish visually from silver. If the percentage is in the range of 20% - 10%, a range of pale yellows will be obtained. At certain periods in history this alloy has been highly prized, as it was among the Romans especially for jewellery. It was called the metal of moonlight.

7) Flux - Flux is used in the soldering process in order to exclude air and dissolve the oxides which develop during the process. Oxides on the surface prevent the flow of the solder. For brazing and hard soldering borax is the usual flux used.

8) Gold - Gold found in nature, that is native gold, is never in a pure state, being most commonly alloyed with copper or silver, and less commonly with iron. Since gold can be found in the alluvial detritus of gold-bearing rocks, as placers, washed free of surrounding material, in river and stream beds, it may well have been the first metal used by man. Reef gold, mined from auriferous rock, was obtained in some cases by fire-setting. Fires were built against the face of the rock setting or cliff and after the rock had been well heated, water was thrown on it to cause cracking. This

greatly facilitated the freeing and gathering of the rock material which then had to be broken into small pieces to remove the gold particles. The proportions of the alloys of native or reef gold reveal a great variation. Analysis of these proportions is one diagnostic means of determining the source of the gold if enough archaeological material has been recovered. This information also gives some indication of the state of metallurgic development, depending on the amount of impurities present or the degree of refinement of the gold.

Cupellation is a refining method early used to rid the ore of base metals. By Roman times improved methods, including liquation and, with the use of mercury, amalgamation, were introduced. Two methods were used to separate gold and silver: 1) the salt process and ii) the sulphur process of compounding the silver and leaving the gold in a refined state.[1] Alloys were tested for purity by the touch stone method (see under gold assaying).

Because of its incorruptibility, gold has been the symbol in many cultures variously for the immaculate, a god, or infinity.

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1. Strong, 1966, p.2.

2. See Tylecote, 1962, pp.1-7 on native metals. For a general work devoted to the history of gold, see Sutherland, 1969.

9) Graver - The graver is the tool used in the engraving process, and hence its action is to subtract metal from the worked surface. It is made of steel (early ones were made of bronze to work bronze, gold and silver) and is about 10 cm long and sunk into a knob-like wooden handle. This handle fits into the palm of the hand. It is from the palm of the hand that the direction is made and the pressure applied rather than by the fingers, except in the more delicate and shorter, brisk strokes.

10) Hammers - There are many kinds of hammers which have various functions. Besides steel hammer heads, wooden mallets are used as well as ones made of leather, horn and recently of plastic. The most common silversmithing and goldsmithing hammers are the following:[1]

i) Raising hammer - The raising hammer usually has two faces, one more rounded than the other. Both are narrow, having a rectangular face about ¾ cm by 2.75 cm. A standard weight for the steel head is 250 g., though they are made considerably lighter than this.

ii) Raising mallet - The tip of a bullock horn (sometimes weighted with lead on the larger side) may be mounted on a handle and used for raising. The face used for raising is cut to a blunt wedge-shape.

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1. Maryon, 1971, pp.89-92.

iii) Planishing hammer - The planishing hammer, which is made in a range of sizes, has two circular faces, one convex and the other flat. The blow of the planishing hammer produces a tiny circular 'dimple' on the surface of metal. The characteristic faceted surface texture of a raised vessel is due to the planishing procedure.

iv) Collet hammer - The collet hammer has very narrow faces, one more so than the other. The collet hammer is used in the process of edge thickening or caulking. Very small collet hammers are made for the small scale work of the goldsmith - such as flattening the end of wire to make a rivet head.

v) Ball-faced hammer - The ball-faced hammer is used in sinking metal into a sandbag or die form, and for bossing work (shaping from the back).

11) "Latten" brass - This is a brass alloy composed of copper, zinc, lead and tin, and was formerly used for monumental brasses and church articles. It has a highly springy quality.

12) Matrix - Sheets of metal or foil are pressed onto a matrix in order to pick up the pattern. When necessary these fragile forms can be reinforced by filling with a plastic substance. In the Roman period lead was probably used for this purpose, while today a plastic substance is used.

13) Niello - Niello is an inlaying material composed of silver, copper, lead and sulphur. There are a number of different formulas for niello, but one of the best because of its low lead content is to be found in the treatise by Theophilus, the 12th century Benedictine monk. Theophilus advised a formula of 2 silver/1 copper/ 1/6 lead mixed with an unspecified amount of sulphur.[1] According to Higgins, niello was not used in jewellery before the Roman period.[2]

14) Noble metals - Gold and silver are referred to as the noble metals.

15) Non-ferrous metals - The large family of alloys which use copper as their major alloying material are referred to as the non-ferrous or non-iron bearing metals.

16) Pitch - A mixture of asphaltum (or natural pitch), linseed oil or tallow and brick dust or plaster of paris is made for use in the process of repoussé and chasing. Held in a heavy hemispherical bowl, it offers a resisting surface, allowing the metal to sink little by little with each tap of the punch. Pitch is used to fill vessels that are to be chased. As the metal work hardens, the pitch is melted with a soft flame and the

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1. Theophilus, On Divers Arts, tr. by J.C. Hawthorne and C.S. Smith, Chicago, 1963.
2. Higgins, 1961, p.28.

vessel is annealed and refilled with the pitch repeatedly until the work is completed.

17) Rock crystal - Crystalline quartz (as opposed to the quartz of small or crypto-crystalline structure) is referred to as rock crystal. Historically in many different cultures and for long periods of time rock crystal has been used as an anticharm, and hence connected with magical, shamanic and religious art forms.

18) Scorper - A flat chisel-shaped engraving tool. If used to rout a line it must be rocked from side to side as it presents a broad face and the pressure required would be considerable to produce a straight trench. It can be used full-face to dig short strokes however. Through experimentation Maryon came to the conclusion that a steel scorper (rather than a bronze one) would have been necessary to produce the tremolo lines of Hallstatt art. This is unexpected evidence for that period.[1]

19) Silver - The history of the use and technical processing of silver is very different from that of gold and can only be considered in relationship to the development of the technology of lead. Silver rarely occurs in its native state, and thus - according to some - it follows that native silver played no part in man's early

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1. Maryon, 1949, pp.117-118.

culture.[1] The following factors are relevant: 1) silver in a native state is in deep veins; 2) native silver is found in the form of fine leaves and filaments which would require melting to be workable (placers of gold, water-washed, tend to be compact shapes and do not require melting to be hammered into sheet or foil); 3) silver converts to its chloride (cerargyrite - AgCl) by chloride-containing surface waters, a corrosion process which is accelerated by small amounts of nitrate such as are present even in dew. Thus surface deposits of native silver would be rapidly destroyed. This process of corrosion accounts for the condition of silver objects buried in the soil as opposed to those of gold which remain under similar conditions intact, even if the surface has undergone "enrichment" (see note 6 under Processes).

Silver has been obtained from the early Bronze Age by smelting lead ores, the commonest of which is galena (lead sulphide, PbS), which occurs in surface deposits in numerous places in the classical world including Britain. Silver tends to be in the upper layers of these deposits. The Laurion mines in Attica, which yielded a vast amount of silver, the richest seam struck in the early 5th century, were said to have more than 2000 shafts, some dug to 80 m in depth. With the

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1. Tylecote, 1962, p.73.

conquests of Alexander, who included prospectors in his retinue, many new mines were opened, and according to Pliny, in almost every province silver was mined. Spain, Britain, Dacia, Macedonia and Asia Minor continued to be principal sources of silver for the Roman world.[1]

Crude lead was extracted from the ore by smelting. The silver is separated from the lead by cupellation which is a process by which the lead and the base metals are oxidized. The products of one of the Shaft Graves at Mycenae reveal a silver purity of 95.59% silver and only .44% lead, and other examples reveal up to 30% lead.[2] By Roman times the quality of silver was consistently high, probably because plate was a prestige form of wealth accumulation by the 1st century B.C. Still the standard of purity was maintained even into late Roman times as the material found in buried hoards testifies.

Because pure silver is very soft, it is frequently combined with copper, and by the sterling standard, at a ratio of 92.5% silver to 7.5% copper. This toughens it sufficiently to be both workable and to sustain stress. Fine silver, or 100% silver, is required in some procedures such as inlay, or as a backplate for translucent

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1. Strong, 1966, p.6.

2. Ibid., p.4.

enamels. As a pure metal it is highly resistant to tarnishing as is pure gold, which is to say, oxides do not form on the surface. The aesthetic of sterling silver, which does tarnish or develop a black patina, is very different from that of gold since no light and dark effect will develop on gold. This made silver a favoured material for repoussé always, and, at various periods, the choice for display of pictorial content.

20) Stakes - The stake has exactly the same function for the silversmith that the anvil has for the blacksmith. While there is a range of shapes commonly used in silversmithing, the possible range of shapes is almost limitless. A smith may make one of mild steel in order to execute a particular shape he has not yet encountered. The prototype can easily be made in wood and then cast. The most frequently used stakes are the following.

1) T-stakes - The T-stake is shaped as the name suggests, by a long horizontal bar of metal supported on a centre stalk. This stalk is fitted into a holder or a vice. In the past large stakes were sunk into sections of tree trunks, fitted tightly into the well chopped in the centre by pouring molten lead to fill any extra space. T-stakes may be up to a half metre in length and 10 to 12 cm in cross-section. More commonly they are a third this scale. T-stakes are made in a

variety of curving shapes including compound curves. These concave surfaces are used for planishing stakes as necessary on vessels.

(ii) Mushroom stakes - The large family of domed-shaped stakes is referred to as mushroom stakes, ranging from slightly rounded surfaces to hemispherical domes. These stakes are used mounted in holders or held in a vice. Mushroom stakes are also used for sinking metal, simply held by the long stalk. Vessels are placed over dome stakes for planishing large bulbous areas. Sometimes many of these stakes of different curvatures must be used in order to planish a vessel which has a complex shape.

(iii) Bottoming stakes - A bottoming stake is circular and with a flat surface. Its function is, as the name suggests, that of flattening the centre surface of the raising and thus establishing the base of a vessel. Such stakes usually must be placed in tall holders so that the vessel can be placed upside-down over the stake and holder.

21) Tracer - A tracer, sometimes called a liner, is a small chisel which is used to displace (not cut) metal in the process of chasing. As the term suggests it is used especially for outlining motifs in the process of chasing. Some of the design motifs on the Agighiol

situlae were accomplished with a tracer.

C. THREE-DIMENSIONAL OBJECTS IN ART

1) Amphora-rhyton - This rhyton is in the form of the amphora, having at least one opening from which liquid can flow. The amphora-rhyton of the famous Panagyuriste Treasure has two openings in the form of little negro boys' faces, the spouts being their mouths (Fig. 41) (see Rhyton, p.192).

2) Appliqué - The appliqué is a type of jewellery, categorically clothing jewellery, which is generally sewn onto material, leather, fur, etc. The most common type of technique applied to these is repoussé or stamping. The appliqué is a jewellery form characteristic of nomadic peoples. In the Renaissance period such work could be quite costly being enamelled or set with gemstones, and was used with other materials such as pearls and gold thread to create a rich embroidery. (For appliqué, the process, see A. Processes.)

3) Bracteate - According to László, bracteatae were gold pendants made by copying the Germanic imitations of original Roman coins. They were produced in the northern parts of Europe after the fall of Rome when they were no longer to be received. And again, according to Pope, the bracteates "were made to be sewn

onto garments at spaced intervals, taking the place of woven design and functioning as the most lavish form of embroidery. Quite similar bracteates have been recovered in Etruscan tombs .... but the Etruscan migrated to Italy from Eastern Asia Minor, not very far from the site where (the example given) was found".[1]

4) Fibula - In principle, the form of the fibula is as the contemporary safety-pin. In its most elemental form, it is constructed by a continuous piece of metal that in mid-section turns back upon itself, perhaps several times, forming a spiral spring, and then returns again to the starting point where a hook has been fashioned to receive it and hold it in place.

5) Greave - The greave, a form of leg armour, was first used during the Greek Bronze Age. Later evidence of its use in the Greek world is found in the early 7th century B.C. Greaves were worn by both Greek and Persian soldiers at the time of the Persian Wars. They remained in use by Roman soldiers until late in the Empire Period.

6) Phalera - The phalera is a form of decoration used on horse trappings. Frequently it was made as a roundel of sheet silver or gold and decorated by means of

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1. Pope, A.U., Masterpieces of Persian Art, New York, 1945, p.21.

repoussé.

7) Phiale Mesomphalos - The phiale mesomphalos is an ancient class of vessel known in both the Egyptian and Mesopotamian worlds. Phialai were produced in most metals and in pottery, faience, glass and wood. The phiale, characterized by the central umbo or omphalos, was the libation vessel of the Greeks.

8) Rhyton - The rhyton is a class of vessel which has been produced in a great variety of forms, frequently having a horn shape recalling the natural horn from which it is derived. Often there is reference to animal form or imagery. The so-called 'true' rhyton has two apertures, a large one for filling the vessel, and a small spout from which a fine stream of fluid can be allowed to flow.

9) Situla - the situla is a class of vessel which has been produced in a variety of forms as a small cylindrical vessel with a rounded bottom or as a 'beaker' with concave sides in the Near East and as a bucket with hoop handle in Central Europe. The situla did have cultic purposes in the Near East. However, it has been suggested that the situla in Europe may have also been used for wine service.

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APPENDICES

I. Temple Treasures

II. A Greek Relief Phiale

III. The Sarmatian Contribution

IV. The Pietroasa Treasure

APPENDIX I

TEMPLE TREASURIES

Evidence for the custom of dedicating goods and objects at shrines is very ancient, and found continually from the archaic Greek period to the Mycenaean age and in still earlier times.[1] The dedication of tithe and first fruits by the country people to their gods is as ancient a custom. The offering of food and drink in vessels was given at the tombs from the Mycenaean age forward. However, the practice of making votive offerings to be kept in a shrine for the purpose of special benefit is a practice for which evidence is confined to narrower limits. Literary evidence[2] suggests that this practice was in existence at least as early as the period between the 11th to the 8th centuries. From the 8th century forward archaeological evidence, commencing at Olympia, allows a more or less continuous reconstruction of this practice.

Offerings left in Greek temples by the worshipper covered an extraordinary range of goods, including the tithe paid in kind. They included metal forms of considerable value. The lists include statues, vases, tripods, vessels, weapons of every description, jewellery, mirrors, crowns, garments for the statues, and a wide

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1. Rouse, 1902, p.348.
2. Ibid., pp.348-49.

range of household items of a practical nature. These were catalogued and sometimes marked for future references with a number, letter or sign. Those of precious metals were described and weighed, while those of non-precious materials were simply listed. At Delos about 60 different kinds of vessels were recorded,[1] and of the phialai at the Temple of Apollo, some examples were described as smooth, fluted, relief, gold inlaid and some were encrusted with gems. Many of the items appropriate for display were set on small pillars, or fixed to a slab of stone.[2] The offerings were arranged in the temple precinct itself, in its showrooms or storehouses. In the storehouses they were grouped by kind and hung over doors and windows; some (such as crowns) were hung by string on the walls.[3] When this space was filled, they were stored in boxes or storage chambers. Broken items of metal were seldom repaired but the pieces were gathered together and cast anew with the name of the original donor carried forward carved on a stone slab with the new form. When the volume of forms of no intrinsic value, especially those of clay, became burdensome, they were buried in trenches, sorted by kind.

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1. Ibid., p.347.

2. Homelle, 1886, p.470. Rouse mentions other examples (p.342, note 3). He suggests that the custom of fastening by a thread or the like may have been used as a sign of dedication with larger objects.

3. Rouse, 1902, pp.342-43.

Theoretically almost any item could become a votive offering,[1] i.e. something given by free will to a being conceived of as superhuman. However, regardless of motive, given as tithe, the unquestioned first fruits, thank-offering, or propitiation, the great variety of items taken collectively from the inventories fall into two main divisions: 1) material - given for their intrinsic value; 2) ideal - things given for what they imply. Some items, such as the phiale, obviously find a place in both divisions.

Objects given for their material value were regarded as payment to a god. This payment was contribution to be used for purchase of land for the sacred grove, or alternatively for the erection of shrine and treasure buildings (which eventually might be several), or for the maintenance and supervision of the treasure itself, including payment of supervisory staff. All these expenditures were funded from these offerings. The shrine was furnished much as was an idealized dwelling with all manner of household goods besides the votive items which included perishable as well as permanent goods. The precious minerals given as tithe brought bulk materials into the treasure in the form of gold and silver ingots as well as an immense number of phialai, all rather uniform

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1. Ibid., p.352.

in size. Small objects were melted and cast into this form, tending towards the uniform weight of about 100 drachmas (approximately 1/3 kg). This uniform unit of weight would have greatly facilitated their being used for payment of various sorts.

Of the offerings in the second division of temple treasure, the oldest form, which was perhaps as old as the worship of the gods and heroes themselves, is that of dedicated war-spoils.[1] At first these were heaped up, prize examples of arms hung from some tree or pillar, as a memorial to the rout, and an offering to the protecting deity.[2] They would later enter the temple treasury and be catalogued, and some were inscribed with the names of the donor or donors and the name of the battle, thus commemorating the event. From this custom came the secondary development of gold, silver and gilt models of shields, armour and weapons which still later in time was reduced to miniature models. Masterworks, as first fruits and tools, or again models of tools such as the golden anvil found at Delos, were appropriate votive offerings.

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1. Ibid., p.366.
2. Ibid., p.99.

APPENDIX II

A GREEK RELIEF PHIALE

An example of the late 5th century Greek relief phiale is found in the silvered tin phiale (Inv. no. 39.11.4) in the Metropolitan Museum in New York (Fig. 12).[1] The surface of the phiale is divided into two friezes, a larger outer one and a narrower, more densely figured inner one. The outer frieze contains the images of four quadrigae, each driven by a Nike and carrying as a passenger a god: Heracles with his club and accompanied by a dog; Athena wearing a peplos, aegis,[2] helmet and holding her shield with an aegis and gorgonic device, and accompanied by a deer; Ares in battle dress, cuirass, helmet, shield, the eagle in flight preceding his chariot; Dionysus holding his thyrsus with fillet, and his animal attribute, the panther, prancing in front of his chariot. An Eros flies in front of Athena's chariot and another is flying before Dionysus' horses.

The inner frieze is of a banquet scene which is set off by a row of bead-and-reel motifs, by this time commonly employed in architecture, and - as used here - possibly meant to suggest an interior scene. Again

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1. Richter, G.M.A., "A Greek Silver Phiale in the Metropolitan Museum", American Journal of Archaeology, 45, 1941, 363-389. Since the time of Miss Richter's writing it has been discovered that this phiale is made of silvered tin. See Strong, 1966, pp.81, 89.

2. Rouse, 1902, p.378. The aegis is derived from a goatskin which was probably the cape worn by those who worshipped Athena.

Dionysus is present and holding his thyrsus with fillet, placing his arm about Ariadne; other features are a wreathed krater (a symbol of death), a silenos who plays a double flute, a thyrsus at his right arm, a large vine leaf, and a panther. A female figure, perhaps Hebe, offers a fluted phiale and a wreath (both symbols of victory) to Heracles who is leaning on his club. There are other features too: a female figure with drum; an Eros with a wreath in both hands flying towards a group of a female figure and a man holding a fluted phiale; an Eros offering a deep bowl or cup to an old, bald man taking food from a platter; a tree; a lion gardant; a man with a lyre (?Apollo) and a woman with a harp (?Muse); and finally a thymiaterion (incense-burner) on a tripod base.

The outer frieze represents the Apotheosis of Heracles.[1] This frieze is very similar to representations on 5th-4th century Attic and South Italian vases, where the occasional presence of a funeral pyre beneath the chariot points to Heracles' apotheosis. The inner frieze represents the arrival of Heracles at Olympus,[2] which is in fact the celebration of his wedding to Hebe at a banquet for deities, the hero feast or death feast. Dionysus, another figure typical of the hero feast

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1. Richter, 1941, p.370.
2. Rouse, 1902, p.22.

scheme, is also present in both friezes as well as numerous Dionysian symbols, at least one with each figure, or group of figures, in the inner frieze; panther, thyrsus by the silenos with double flute, two fluted phialai and a deep bowled cup; vine leaf, intended as the grape vine leaf, a krater, surely in reference to wine, and a male figure, probably Apollo. The flute and drum were the instruments of the Dionysiac revels. If this inner frieze represents the wedding of Heracles, the mortal who became immortal by his mighty labours, then the subject is not simply the wedding of two of Zeus' offspring. Cultic vessels, as votive offerings generally, are not used merely to record myths; their imagery and form have cultic significance, though of course mythological content may be present.[1] The cult involved here is Dionysian and the theme is immortality, the victory of death, a theme which preoccupied the Greek philosophers of this period.

This is not the only example of a phiale devoted to this theme. There are at least five, two of which were hammered from the same die and are now in the Metropolitan Museum.[2] Another example of this category is the silver phiale from Èze which is in the British Museum (Fig. 21).[3]

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1. Ibid., p.33, note 8.
2. Richter, G.M.A., "Greek Fifth-century Silverware and Later Imitations", American Journal of Archaeology, 54, 1950, pp.359-70.
3. Walters, 1920, 3, no. 8, pl. 22.

The example recovered in Thrace (Fig. 27)[1] which is now in the Plovdiv Museum, has been engraved and the figures and horses gilded.

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1. Venedikov, 1975, pls. 170-172, note p.362.

APPENDIX III

THE SARMATIAN CONTRIBUTION

The theories concerning the nature and extent of the Sarmatian influence both in the North Pontic region and in the later development in the art of the Migratory period have been numerous. Rostovtzeff,[1] Minns,[2] and Borovka[3] supported a positive position, namely that the art of the North Pontic carried across Europe, principally by the Goths, was a powerful factor in determining the art of the later Medieval period. This point of view was later challenged by Holmquist,[4] Werner[5] and others[6] who looked to the Mediterranean not Eastern Europe as the source of inspiration. Holmquist believed Italy and the provincial Roman workshops generally were the sites of transfer of the Roman animal imagery which he interpreted as the basis of the Germanic animal style.[7] The use of inlaid stone (and glass) he attributed to these same

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1. Rostovtzeff, 1922, Ch. VI, The Sarmatians.

2. Minns, 1913, p.34.

3. Borovka, 1928, p.73.

4. Holmquist, W., Germanic Art during the First Millenium A.D., Stockholm, 1955.

5. Werner, J., Die beiden Zierscheiben des Thorsberger Moorfundes, Berlin, 1941.

6. See Holmquist, 1955, p.9f.

7. Ibid., pp.10-12. In particular, Holmquist cites the Marcomanni of Bohemia who had the most advanced industrial art during this period and who were also in closest contact with the Roman Empire.

sources.[1] Initially Werner looked specifically to the Lomdards in northern Italy, a point of view he later abandoned on the basis of the then current excavations of Lombard cemeteries in Hungary.[2]

Today the genesis of the art of the early Migratory period is clearly understood to be of far greater complexity than to search for a single dominant influence. It is now well appreciated that many sources - Roman, Byzantine, Pontic, Primitive Germanic, Celtic and Primitive European - contributed elements and characteristics to the art of the 4th and 5th centuries in Eastern and Central Europe.[3] The polychrome style spread from Iran to the West where it combined with techniques of antiquity, granulation, filigree, wire plaiting and beaded wire.[4] The phenomenon of the Migratory period can only be understood from a Eurasian perspective.[5]

Today the nature of the Sarmatian contribution is more fully understood in light of recent research.[6]

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1. Ibid., p.28.

2. László, G., The Art of the Migration Period, London, 1974, p.29. On this subject László cites Werner's work Die Langobarden in Pannonien, Munich, 1962.

3. Ibid., p.27. More specifically László cites Mediterranean, Scythian and Celtic as the main sources of the art of the Migratory period, p.19.

4. Ibid., p.27.

5. Ibid.

6. Sulimirski, 1970. This is the first general study to be devoted to the Sarmatians. Recent archaeological work carried out in the steppe-lands east of the Volga, in the Ukraine and in Hungary have been incorporated into it.

The Sarmatian culture was successfully implanted in the Pontic region and was not subjected to serious contamination by Greek influences as had been the Scythian art in previous centuries.[1] This factor alone is critical to appreciating the nature of their art, and hence of their contribution.

As a nomadic people whose art had absorbed Persian elements and techniques, they represented a new wave of orientalism which the waning Greek influence could not master.[2] Certainly these people were influenced by coming into contact with the refined urban culture of the North Pontic cities and some did modify their life-style and generally gain in terms of overall prosperity.[3] However, the vitality of the Sarmatian culture had not dissipated by the time the Goths moved south-eastward at the end of the 3rd century and became the new masters of the Pontis.

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1. Ibid., Ch. V, The Late Sarmatian Period, mid-first to fourth century A.D., pp.142f.

2. Ibid., p.150.

3. Brajčevskij, M., "Influence culturelle de la pontides antique sur les tribus de la steppe boisée de l'Europe orientale", Congrès International d'Archéologie Slav, II, Warsaw, 45, 1965, pp.372-378.

APPENDIX IV

THE PIETROASA TREASURE

In the spring of 1837 two peasants from the village of Pietroasa near Buzău (Buzău District), in searching for stone, discovered a large treasure of gold superficially buried at the foot of Mt. Istrița. This mountain is located in the southeastern slopes of the Carpathians at the region where the range changes direction (from north-south to east-west). Eventually when the peasants confirmed that their find was not bronze, but gold, they cut some of the objects and flattened vessels to facilitate transporting the treasure for sale in Bucharest. Shortly thereafter, knowledge of the treasure reached the authorities. Of the original 22 objects (7 vessels; 15 pieces of jewellery) only 12 were recovered (5 vessels; 7 pieces of jewellery), and these were badly damaged. Most of the inlaid stones (or glass) were missing. Despite this severe loss, the Pietroasa Treasure was the largest gold treasure recovered to that date, weighing 18.7975 kg.[1]

In 1875 the Treasure was stolen from the National Museum in Bucharest and underwent further mutilation before it was restored to the Museum.

Until fairly recent years the Treasure has rested securely dated to the late 4th century A.D., and has been

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1. Dunăreanu-Vulpe, 1967, p.10.

presumed to have been buried at the time of the Hunnish invasion.[1] In particular it has been considered possible that this was the treasure of the Visigoths and that it was buried by Athanaric prior to his fleeing south of the Danube in 376 A.D.[2] Many scholars still maintain this point of view.[3] Horedt, who originally espoused this hypothesis, later concluded that this was not the treasure of the Visigoths but of the Ostrogoths and that it was to be associated with events which took place about 450 A.D. at the time of the breakup of Attila's empire.[4] Treasures discovered in the last few decades, such as the princely hoards at Someşeni and Apahida II, were probably the cause of Horedt's revised thesis.[5] The dating rests on the basis of technique and there are supporters in favour of both the 4th and the 5th century.[6] The question remains unsettled.

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1. Odobescu, 1899-1900.
2. Ibid.
3. Theodorescu, R., Un mileniu de arta la Dunărea de Jos, Bucharest, 1976, p.48f, figs. 29-47.
4. Horedt, K., "Datarea Tezaurului de la Pietroasa", Acta Musei Napocensis, VI, 1969, pp.549-551.
5. Harhoiu, R., The Fifth-Century A.D. Treasure from Pietroasa, Romania, Oxford, 1977, p.6.
6. Ibid., pp.3-6.

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65 Other view of Fig. 64. Photo source as above.

66 Other view of Fig. 64. Photo source as above.

66a Other view of Fib. 64. Photo source as above.

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146c Detail of Fig. 146a.

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153 Back view of Fig. 152.

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